THE JOURNAL

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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Volume XXX **JULY, 1931** **No. 7** [Whole No. 347]

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VOL. XXX JULY, 1931 No. 7

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THE X-RAY DIAGNOSIS OF PEPTIC ULCER

A. W. CRANE, M.D.†
KALAMAZOO, MICHIGAN

There is much in common between ulcer of the stomach and ulcer of the duodenal bulb. It is the same type of lesion on the same type of mucosa, for, notwithstanding anatomical distinctions, the duodenal bulb is embryologically and histologically a part of the stomach. There are no constant symptomatic differences and until the development of X-ray methods no reliable differentiation was possible.

Few of us may realize how recent is the recognition of duodenal ulcer. In looking over a succession of old editions of master books such as Strimpell, Osler and Musser, we may see duodenal ulcer emerge rather suddenly about 1911 from autopsy records to a place on clinical charts. This date corresponds accurately with the development of the X-ray examination of the gastro-intestinal tract by the bismuth method, which, however, could not have made such headway had it not been supported step by step

†Dr. Crane graduated from the University of Michigan Medical School 1894. He specialized as diagnostician since 1915; he has been an investigator of X-rays since 1897; Chairman Kalamazoo County section Michigan State Commission of Medical Preparedness, and member Michigan Medical Advisory Board No. 12, 1917-18; appointed member National Research Council, 1919. Member London Roentgen Ray Society since 1899; member American Roentgen Ray Society (president 1916), Radiological Society North America, American Michigan State and Tri-State Medical societies, American College of Physicians, Kalamazoo Academy of Medicine (president 1908). Acting editor American Journal Roentgenology, 1917-18, later member editorial Board. He was awarded gold medal, 1921, by Radiological Society of North America "in recognition of achievement in science of radiology."

by surgical exploration. Where this surgical exploration took place is disclosed by Osler in the edition of 1911 revised by his own hand in which he says: "From gastralgia, dyspepsia, and hyperchlorhydria the diagnosis of the chronic, indurated peptic ulcer is very difficult; in many of those conditions, indeed, surgeons have shown clearly that the symptoms are due to an ulcer. That the brothers Mayo should have operated (to June 1, 1908) on 272 cases of duodenal ulcer (as many almost as have been reported in the whole literature) and that Moynihan should have had to June, 1908, 174 cases, indicates that we physicians have been napping, and that what the modern 'gastroenterologist' needs is a prolonged course of study at such surgical clinics as Rochester (Minnesota) or Leeds. It is not as if there were any possibility of mistake, as these are men whose ways and work are known to all. More particularly is the diagnosis of duodenal ulcer important since its relative frequency has been demonstrated." We may add that by 1920 the records of the Mayo Clinic showed 4,000 cases of duodenal ulcer proven by operation and many more with this diagnosis but not surgically treated.

Gastric ulcer at the same time and by the same methods was placed at last upon a firm diagnostic basis. Gastritis has been brought into focus and gastralgia has faded out of the picture. By a study of living instead of postmortem pathology, the duodenal bulb, or rather that small extremity of the stomach beyond the pylorus, is seen to be the most subject to ulceration of any portion of the alimentary tube from mouth to rectum—and the most nearly immune to cancer. Thus the X-ray in a few years hand in hand with surgical exploration has made greater advances in the diagnosis and treatment of gastric and duodenal ulcer than had been made in all the centuries preceding Roentgen's discovery.

Now that internists and surgeons are so often called upon to read X-ray reports of ulcer cases and correlate them with the rest of the case-records, they may presumably be interested in an explanatory review of the diagnostic signs on film and screen.

Three major signs, any one of which means gastric ulcer, are, the niche, the accessory pocket and the hour-glass. A group of other signs which in combinations indicate gastric ulcer in the absence of a major sign are, the six-hour residue, the incisura, antrum spasm, contractures and peristaltic behavior. The niche or nichen sign means the profile of an ulcer which is filled with barium. It forms a protrusion from the silhouette of the barium-filled stomach projecting into the wall of the stomach which is transparent to the X-ray. It is usually on the lesser curvature or posteriorly located, in which case the body must be rotated until the ulcer is seen in profile. It means a penetrating, not perforating, ulcer. The irritation of such an ulcer not infrequently stimulates an enduring contraction of a narrow band of circular muscle fibers causing a deep narrow fissure in the greater curvature known as an incisura. An incisura may thus point like a finger at a clearly visible niche or at one so small as easily to escape detection. But incisuræ may be the result of reflex causes outside of the stomach and must not be regarded as pathognomonic of ulcer, although always highly suggestive and a sign for investigation.

The accessory pocket forms from the gradual perforation of an ulcer. The barium passes through a channel into a small pocket which in the upright position of the patient will show a fluid level and a little air space above. This is the unequivocal sign of a perforating ulcer.

Organic hour-glass results from cicatricial contractions of old ulcer, from spasm excited by open ulcer and from the filling defects of cancer, benign tumors and syphilis. These may usually be distinguished by X-ray observation, reinforced by clinical and laboratory methods. But reflex spasm may mimic certain forms of the hour-glass stomach with astonishing persistency. Observations on different days may show no change and yet atrophine in sufficient doses may restore the normal gastric outline.

Ulcer at the pylorus must be considered as gastric and may show a niche and bring about antiperistalsis or obstruction due to spasm or stenosis.

For the most part these are signs of chronic ulcer. But ulcer in an acute stage may show a distinctive nichen sign. Gastric and duodenal ulcers are recurrent and ulcer patients frequently describe two or more attacks a year lasting several weeks or months. In the acute stages of these attacks the roentgen signs are commonly well developed. However, acute ulcer may be a shal-

low erosion of the Dieulafoy type without an X-ray sign unless it be a disturbance of the peristaltic pattern. Indeed gastric hemorrhage may come suddenly without preceding signs or symptoms of any description. While always alarming, gastric hemorrhage is not always due to ulcer or cancer and vomited blood is not always gastric. Hepatic cirrhosis and esophageal sources of bleeding must be excluded.

The accessory pocket results from a perforation of the stomach wall so gradual as to allow the formation of plastic exudate and the prevention of an open communication with the peritoneal cavity. With few exceptions they are about the middle of the lesser curvature. But occasionally, near the pylorus, an ulcer, exposed to active antrum peristalsis, may break through with the escape of more or less stomach contents and gas. This, of course, is an acute process attended by pain, abdominal distension, vomiting and collapse. It is always more satisfactory to operate upon a demonstration than upon an analysis of symptoms. In no other X-ray examination is a positive diagnosis more speedy and satisfactory. No barium should be given. The patient is supported in bed for a few seconds, in the sitting position, while a film is exposed during a moment of suspended respiration. A thin layer of gas beneath the right diaphragm means perforation. It is obviously necessary that the trunk of the body be upright at the time of the X-ray exposure. Many patients are not too ill to be sent to the X-ray room on admission to the hospital and can stand behind the fluoroscopic screen. One moment of careful screen inspection may be sufficient. In one of our recent cases, acute intestinal obstruction was suspected because no preceding history of stomach symptoms was obtainable. But the demonstration of gas beneath the diaphragm made farther examination superfluous and the operation revealed a perforating ulcer in the lesser curvature near the pylorus.

The perforation may, of course, be anywhere in the gastro-intestinal tract below the diaphragm but is to be looked for first near the pylorus or just beyond in the bulb, whose walls are thin and less promptly supported by plastic exudates. This is doubtless the reason why in Strimpell's "Practice of Medicine" as late as 1911 duodenal ulcer is mentioned only under the head of Perforating Ulcer of the Duodenum.

The X-ray signs of duodenal ulcer are fewer, more decisive and more easily demonstrated than those of gastric ulcer. Outstanding is the deformity of the bulb, which is indelibly associated with the name of Lewis Gregory Cole. So long as the deformity is constant during different phases of gastric contractions, an analysis of causes is unnecessary for the purposes of diagnosis but when analyzed we find in the bulb, as in the stomach, the niche, the incisura, the accessory pocket and the contracture. The contributory signs are gastric—energetic peristalsis and rapid initial expulsion of stomach contents with perhaps a six-hour gastric residue due to pylorospasm.

Few signs are so nearly pathognomonic as bulbar deformity. Carmen states that in the Mayo Clinic the diagnosis of duodenal ulcer made on this sign alone was proven by operation to be correct in 98 per cent of cases. The 2 per cent of error resulted from deformities due to adhesions, reflex spasm and cancer. As for cancer, Carmen observes naively that "since it was seen but four times in 5,000 operative cases, failure to distinguish it from ulcer may be forgiven." However distinctive bulbar deformity has proven to be, it must be obtained by skill and interpreted by experience. Such an X-ray diagnosis, which may determine months of medical treatment or upon which may rest the decision for operation, should be left, not to a technician, not to the physician or surgeon himself, but to the competent roentgenologist.

Peptic ulcer may be multiple as in the case of double ulcers of the stomach or kissing ulcers of the duodenum. Also both gastric and duodenal ulcer may co-exist. An X-ray report should not be doubted therefore merely because ulcers seem unexpectedly plentiful in some particular case.

Ulcer of the duodenum beyond the bulb is very rare and can be recognized only by the demonstration of contractures and partial obstruction. The behavior of the stomach may distinguish between ulcer and cancer in this locality,—ulcer causing hypermotility and cancer a massive gastric-residue without pyloric obstruction.

Proven or not proven by operation may carry conviction not justified by the facts. In its present stage of development, the

X-ray is often a more delicate and accurate means of demonstrating peptic ulcer than exploratory operation. More than one roentgenologist has been unable to find adequate expression for his feelings when after a careful positive X-ray diagnosis he learns that the surgeon reports, without opening the bulb, that no ulcer was found. Even when the bulb is opened it is only too easy to overlook the small slit-like sulcer which causes such distressing symptoms and produces on the X-ray films such characteristic spasmodic deformities.

Usually autopsies in the aggregate furnish proof beyond which there is no appeal. Duodenal ulcer is a curious exception. In the 10th edition of Osler's Practice (1926) revised by McCrae, this distinguished pathologist and the professor of medicine has added, in the first paragraph under the head of Peptic Ulcer, Gastric and Duodenal, this statement: "Postmortem statistics show a great preponderance of gastric ulcer, but the experience of surgeons has taught us that in a large majority of cases which come to operation the ulcer is outside the pyloric ring."

In consequence of the success of the X-ray demonstration of peptic ulcer and gastric cancer all sorts and conditions of stomach troubles are now referred to the roentgenologist for examination. Symptoms more or less characteristic of ulcer may be recorded and yet the X-ray show no ulcer, no cancer, very often no stomach affection whatever.

The value of negative findings is frequently depreciated by both patient and surgeon. The competence of the roentgenologist or of X-ray methods may sometimes be at stake when the clinical diagnosis of ulcer seems well founded. That no man or method is infallible is commonplace because so true. But the consideration of such negative findings, in the face of positive symptoms, signs and history, opens one of the most interesting chapters in the whole range of diagnosis: viz., that of the symptom-reflex. William J. Mayo has called the stomach the signboard of the abdomen on which are written numerous complaints of other organs. Cheney says no less graphically that the stomach plays "the part of a radio receiving instrument presenting impressions that are produced far away." He as well as other recent authors discusses a long list of diseases capable at times of giving stomach symptoms more or less suggestive of ulcer and devotes a chapter each to Appendix Dyspepsia and Gall-Bladder Dyspepsia.

It is evident in practical work that the X-ray examination of the stomach should include the entire gastro-intestinal tract, not excepting the esophagus. Since the oral administration of tetraiodophenolphthalein has proven successful, it is practicable to include the gall-bladder, the intravenous administration being reserved for confirmation in doubtful cases.

While the X-ray may occasionally be useful in a few other aspects of the differential diagnosis, the rest must now be left to the methods of the internist and the clinical laboratory.

The use of the X-ray in the diagnosis of gastric and duodenal ulcer extended rapidly in surgical practice, due largely to the example of the Mayo Clinic, but recognition has come very slowly in the standard works on Medicine. In the latest and one of the most authoritative, however, we find a full acknowledgment which we will quote as a fair summary of the subject. This is by Cheney in Vol. II of the New Oxford Monograph, edited by Henry A. Christian, of Harvard University.

"Without the evidence which the X-ray supplies, no conclusion is justifiable as to whether ulcer does or does not exist. * * * It substitutes demonstration for inference, and either confirms or disproves the suspicion aroused by history and by gastric analysis. And yet it must be remembered that X-ray reports are not infallible. It is possible for an ulcer to be overlooked, or for one to seem to be present when it really is not. Therefore, while in general the X-ray findings are to be given great weight, they must not be accepted as final proof unless they are considered in connection with all other facts elicited by all other methods of investigation."

MEDICAL TREATMENT OF PEPTIC ULCER*

RALPH C. BROWN, M.D.†
CHICAGO

During the past two decades widely differing opinions have been held by authoritative men regarding the method of treatment of ulcer of the stomach and duodenum, primarily as to whether it should be considered a medical or a surgical disease. Much earnest discussion has resulted, the surgeon being confirmed in his viewpoint by the large number of ulcer patients finally coming to operation after one or many courses of medical treatment; the physician equally impressed by the continuation or recurrence of ulcer symptoms in many patients following operation, as well as the appreciable mortality risk incident to the various types of surgical operations.

As the years have passed and those having a large clinical material in this field have gained a broader experience, there has developed among physicians and surgeons a mutual respect for the functions that each may perform in the relief of the sufferer from this malady, a clear recognition that there are peptic ulcers that can and should be treated successfully by medical measures, as well as a definite group of cases in which the future welfare of the patient may best be safeguarded by good surgery. The able paper read by the chairman of the Section on Surgery, Dr. Lahey, at a recent meeting of the American Medical Association offers striking evidence of the manner in which the medical and surgical viewpoints have converged to a degree where, happily, little difference of opinion now exists. Quoting Dr. Lahey, "Any impartial attitude toward the modern management of gastric and duodenal ulcer at once admits the important fact that peptic ulcers are today no longer primarily surgical. A patient with gastric and duodenal ulcer cannot with propriety be passed on to the surgeon for immediate operation as can the patient with gallstones, appendicitis, hernia, and removable tumors. He must come to surgery as the result of the failure of medical management or because of the demonstration of certain surgical indications."

Consideration of the subject of the treatment of ulcer should be based on the concept that every ulcer with which we are called upon to deal was at one time a simple, more or less superficial defect in the wall of the stomach or duodenum, which in the earlier weeks or months of its life history could have been readily healed by appropriate medical measures. As the British authority Bolton[1] pointed out in discussing the relation of medicine to surgery in the treatment of gastric and duodenal ulcer early this year, if all ulcers were treated efficiently in this early period of their life history there would be left no chronic ulcers or their complications for the surgeon to operate upon. The difficulty lies in the fact that either the lesion is not diagnosed in its early course or if recognized has not been given adequate treatment. Bearing on the first point, it is of interest to note that in a survey I conducted this spring covering the ulcer cases entering the Presbyterian Hospital during the period 1912 to 1927—some 2,000 cases—the average length of time ulcer symptoms had been existent before the patient entered the hospital was 7½ years. Most of these cases had been treated medically in various fashions, for the most part very indifferently. It is easy to visualize the sequence of pathological changes that is apt to occur in the average ulcer persistent or recurrent for any such period of time: in the case of duodenal ulcer the tendency to fixation of the callous base of the ulcer on the pancreas and progressive narrowing of the lumen of the first portion of the duodenum by contracting scar tissue; in gastric ulcer, so frequently situated on the lesser curvature, similar involvement of the adjacent organs—liver or pancreas—the development of a thick callous base with obliteration of the blood supply, thus facilitating extension of the ulcerated surface into the chronic saddleback type of ulcer with its end-stage, hour-glass deformity of the stomach.

It is apparent that a definite responsibility rests upon us in respect to the diagnosis and effective treatment of this disease in its earlier periods. The diagnosis is by no means always a simple matter. The dyspep-

*Read before a joint meeting of the Medical and Surgical Section, Michigan State Medical Society, Benton Harbor, September 16, 1930.

†Dr. Brown is a graduate of Rush Medical College, 1904. He is attending physician at the Presbyterian Hospital, Chicago, and clinical professor of medicine, Rush Medical College.

tic group is a large one and painstaking work is necessary to differentiate the cases of actual structural disease of the stomach from the functional disorders of stomach and bowel that so often more or less closely simulate peptic ulcer. Careful analysis of the distress picture is of the greatest importance in this respect, for the pain or discomfort of ulcer results from the irritant effect of free hydrochloric acid upon the surface of the ulcer; hence ulcer pain occurs with a definite and typical time-relationship to food taking and is invariably relieved by acid-neutralizing agents such as protein foods, alkalies and by emptying the stomach. In a careful abstracting of 1,224 case histories of ulcer I found a typical time-relationship to food-taking recorded in 1,143 histories, the pain or distress appearing

1 to 3 hours P. C. in 20%
2 to 3 " " " " 48%
3 to 4 " " " " 32%

Thus in 80% of this large series of ulcer of all types the epigastric distress appeared between 2 and 4 hours after food taking.

Sixty-six per cent described their subjective sensation of discomfort as either gnawing or burning, and almost without exception the distress was sharply localized, usually to a fingerpoint. Rarely does ulcer produce a diffuse abdominal discomfort. I purposely avoid using the word "pain" because so large a proportion of ulcer sufferers have no actual pain. This should be strongly emphasized, for unquestionably there is a general impression that ulcer of the stomach and duodenum is a painful lesion. Often it it is, but with equal frequency the subjective symptom is described as a discomfort rather than an actual pain. In the series of 1,224 cases referred to, 49 per cent described an epigastric *distress* or *discomfort* and 51 per cent some type of definite *pain,* chiefly gnawing, burning or aching.

The old conception of hyperchlorhydria fortunately is passing out of existence. We now know that the patient who for weeks or months has frequently had epigastric distress, well localized and appearing 2 to 4 hours after eating, with normal or higher than normal acid values in the gastric content, probably has an ulcer and this probability may be considered almost a certainty if there is also a definite point of localized tenderness to be found upon physical examination. In such cases, should an expert X-ray examination fail to reveal roentgenologic evidence of ulcer, the patient should be instructed to eat coarse foods for a week or two and test any resulting distress with calcium carbonate, bicarbonate of soda or food. If relief is invariable and complete a diagnosis of probable ulcer may be made.

PRINCIPLES GOVERNING MEDICAL TREATMENT

Fifteen years have passed since Sippy published his paper on the treatment of peptic ulcer. Today everyone is in agreement that the ideal condition to bring about in the stomach of an ulcer-bearing patient is one in which the ulcer surface is subjected to the least possible degree of corrosion by hydrochloric acid. Diets are arranged having a maximum number of acid combining units (milk and eggs), fats in the form of cream, butter and olive oil are given to depress HCl secretion with atropine as an adjuvant and the known stimulants to HCl secretion are rigorously excluded. But these measures are not sufficient to completely neutralize the gastric acidity from morning until bedtime, hence the use of various alkaline neutralizing agents. An essential element in the Sippy method is the determination in the individual ulcer case of the precise amount of such alkali needed to keep the stomach content acid-free. But in the actual carrying out of medical treatment for ulcer, both in this country and in Europe, the tendency is to still continue to use alkalies sparingly, too sparingly to realize the ideal of complete neutralization of free HCl. It would seem proper to inquire why this viewpoint exists. It seems to me there are three chief reasons: First, the relative ease with which ulcer symptoms may be temporarily allayed by a less rigid form of management. Second, unwillingness to subject the patient to the inconvenience of following a somewhat exacting regime. Third, fear of the danger of causing toxic symptoms by the use of considerable doses of alkalies. The first and second objections deserve scant discussion. One does not hesitate to lay down rigorous measures when it is a question of saving the life of a severe diabetic and there are few intelligent ulcer patients who fail to carry out a painstaking form of treatment if they are told why it is well for them to do so. The third reason is perhaps more

valid. Certain individuals do not tolerate continued large amounts of alkalies well, any lowering of the renal excretion function is a handicap; old people do not react to alkalies as well as the young, but even in young individuals with sound kidneys one occasionally sees a curious and as yet unexplained idiosyncrasy, with tendency to develop, under moderate doses of alkalies, headache, anorexia, nausea, polyuria, thirst, great irritability and possibly a delirium. I wish to clearly point out, however, that such cases are the great exception and that the vast majority of ulcer patients may safely be given amounts of alkalies sufficient to effect neutralization of free HCl in the stomach from morning until evening, thus maintaining an ideal status for the healing of ulcer.

DETAILS OF TREATMENT

I shall not tax your patience with details of the medical treatment of uncomplicated gastric and duodenal ulcer which are familiar to you, but shall refer rather to certain types that are more difficult to heal, having in mind particularly outlet ulcer associated with pyloric obstruction, very large and deeply-penetrating gastric ulcer, and ulcer with hemorrhage.

The tendency of ulcer situated at or near the pylorus and in the duodenum to cause scar tissue stenosis is well known. Less generally recognized, however, is the fact that pyloric obstruction often results from spasm and inflammatory swelling, factors which can readily be eliminated by medical treatment. Pyloric obstruction in some degree should always be suspected when the patient gives a history of pain awakening him from sleep during the night hours. Relative frequency of this complication is strikingly revealed by the figures obtained in the survey to which I have already referred, 425, or 34 per cent, of our cases having given a history of night pain. Failure to recognize and properly manage the resulting handicap to the motor function of the stomach is responsible for a great many failures in medical treatment. Management during the day and evening may be accurate to a degree, but if the stomach is unable to empty itself until the early hours of the morning the continued secretion of highly acid gastric juice during the night will inevitably tear down such delicate new granulation tissue as may have formed. The diagnosis of obstruction is easily made by emptying the stomach with a tube at an arbitrary time (usually 7 or 10 hours after the taking of a generous meal), by cautiously inflating the stomach (using bicarbonate of soda and tartaric acid) to stimulate visible peristaltic waves, checking these findings with fluoroscopic evidence of canalization of the lumen at the site of the ulcer associated with increased number and depth of gastric peristaltic waves. Many patients will tolerate a marked degree of pyloric obstruction without vomiting. As a rule acid values run much higher than in non-obstructive ulcer.

In treating an ulcer with pyloric obstruction the objective is two-fold: to neutralize free HCl in the gastric content from morning until bedtime and to insure an empty stomach during the night hours. The latter indication requires that the stomach be emptied by means of the tube at bedtime and for a few nights an aspiration at midnight should be ordered to determine the degree of any existing continued hypersecretion. In certain cases of long-standing high-grade obstruction the gastric glands secrete in a stomach free from food enormous amounts of highly acid gastric juice. If more than the normal 30 c.c. to 50 c.c. of fasting stomach secretion is found, the continued secretion must be controlled by aspirations at midnight and by giving alkalies at two-hourly intervals during the night. Rarely is it necessary to continue such measures during the night hours longer than a week, as the continued secretion usually rapidly disappears. Spasm and inflammatory swelling, frequent causes of obstruction, will disappear in the course of two or three weeks of effective treatment. Whatever degree of obstruction then remains may be assumed to be due to scar tissue and if there exists an appreciable delay in the emptying time of the stomach the patient should be referred to the surgeon. The case then goes to operation much better prepared than if operated upon without such a preliminary course of medical treatment, since inflammation has largely subsided, continued secretion and dehydration no longer exist and healing of the ulcer is under way. Gatewood recently reported a mortality rate of 1.6 per cent in the gastroenterostomies done at the Presbyterian Hospital over a period of 10 years and emphasized the importance of accurate medical

treatment prior to and subsequent to operation in securing this very low mortality rate.

As physicians we must possess a technic for healing ulcer associated with marked degrees of pyloric obstruction for the important reason that the patient may be aged, may have a serious heart lesion or for other reasons may be a poor surgical risk. The ulcer can almost invariably be healed by sufficiently long-continued careful management and an excellent state of health maintained thereafter throughout life by the simple expedient of having the patient empty the stomach with the tube at bedtime each night. Moreover, the effectiveness of medical measures in relieving pyloric obstruction due to pylorospasm and inflammatory edema is shown by the interesting fact disclosed by Dr. Lahey in his address that of 66 patients entering his clinic with pyloric obstruction but 21 have required surgery.

Until very recently there has been a general tendency to look askance at non-operative treatment of gastric ulcer. The lesion has acquired a sinister reputation as a forestage of cancer. Many have held the opinion that for this reason every gastric ulcer should be excised. What are the facts? The great weight of evidence indicates that gastric ulcer seldom undergoes cancerous change. Early this year, Luff reported in the British Medical Journal the results of operation for gastric ulcer in 645 patients. One of the lines of inquiry followed was the question of incidence of cancer in this large series of gastric ulcer. After-histories were obtainable in 406 cases; in 85 per cent of these 406 patients final report was made from 4 to 9 years after gastric ulcer was proven to exist at operation and the reports showed not a single authenticated case of carcinoma developing from these gastric ulcers. I have reports on 77 cases of gastric ulcers medically treated at the Presbyterian Hospital prior to 1928. Only one of these cases died from cancer of the stomach and even in that case post-mortem examination showed the scar of a healed ulcer in a region on the lesser curvature wholly apart from the carcinoma. Surely such data should allay fear of caring for gastric ulcers by medical measures.

Certain large deeply-penetrating lesser curvature ulcers are accompanied by a continued night secretion so persistent as to require special measures. It is not desirable to use alkalies frequently during the night hours as well as by day for longer than a few days, hence in dealing with an obstinate continued secretion recourse may be had to certain variations in treatment. One such plan is based on the fact that milk will neutralize approximately an equal volume of gastric juice. Thus one may obtain reasonably complete acid control by using 2 ounces of half milk and half cream every half hour during the day and evening, reserving the use of alkalies for the night period in two-hourly doses. This obviates any danger of alkalosis. Another effective method to pursue is the introduction of two duodenal tubes, one with tip in the duodenum, the other with tip in the stomach. Through the first tube all nutriment is given; through the second tube any abnormal accumulation of gastric juice may be removed by hourly aspiration. Either of the above procedures may be used for a week or two to bring a stubborn continued secretion under control.

The treatment of ulcer should be carried out in the simplest fashion by means of which the raw surface may be protected from contact with free hydrochloric acid. Guided by this basic principle one need not be bound by rigid formulæ but may use various means for obtaining the same desirable result, *i.e.*, cessation of corrosion by acid gastric juice. There are few disease conditions in which painstaking attention to details of management will be so frequently rewarded by success.

HEMORRHAGE

Massive hemorrhage occurred at some time during the life history of 24 per cent of the gastric and duodenal ulcers in the Presbyterian Hospital series. It is the most common serious complication of ulcer. The most effective emergency measure to apply in case of life-threatening active hemorrhage is lavage of the stomach with ice-cold water, introducing an ordinary stomach tube with tip just within the stomach (17 to 18 inches from incisor teeth) and aspirating with a large rubber bulb of good suction power. Flushing of the stomach with ice water should be continued until the water returns relatively free from blood. Before withdrawing the tube one fluid ounce of 1-1,000 adrenalin solution is administered through the tube. Blood transfusion should be done as soon as possible if the blood loss has been

great, absolute rest enforced, ice kept constantly on the epigastrium and morphia given hypodermically at stated intervals. If the history suggests ulcer with pyloric obstruction, hourly feedings of milk and cream and neutralizing powders should be ordered to prevent digestion of the blood clot by a probable continued secretion. Otherwise all food may be withheld for two or three days. Repeated blood transfusions may be necessary in certain desperate cases, but few lives need be lost from hemorrhage if the patient is seen before too grave a degree of exsanguination has occurred.

Massive hemorrhage from peptic ulcer occurring in the later years of life, especially in the sixth and seventh decades, or in younger individuals with advanced arterial wall sclerosis is always a grave accident. Hemorrhage from an artery, the wall of which is rigid from calcareous deposits, may be impossible to control. In the aged, even after the cessation of hemorrhage, death is much more likely to occur from a degree of anemia which a younger individual might well survive.

INDICATIONS FOR OPERATION

I have already commented upon the existing excellent collaboration of internists and surgeons in the treatment of peptic ulcer. It is now generally recognized that the ulcer sufferer should be sent to the operating table only after an intelligent effort has been made to cure the disease by medical means. What are the criteria by which one selects cases for operation? By far the largest group of cases referred to surgery from my service is the cicatricial pyloric obstruction group. These cases are operated upon after periods of medical treatment varying from a few weeks to a few months. They come to operation completely symptom-free and as a rule the ulcer is found to be entirely healed. Operation is advised and performed in these cases to relieve a mechanical interference with the normal physiology of the stomach which, if unrelieved, is very likely to lead to recurrence of the ulcer. The scar tissue of a healed duodenal ulcer is truly an area of lessened resistance to digestion by gastric juice and certainly it tends to break down when, as in the obstructive cases, it is exposed to a flow of highly acid gastric content from breakfast time until far into the night hours.

Another type of case requiring surgery is the duodenal ulcer with obstruction which responds well to medical treatment but tends to repeatedly recur, often with hemorrhage, some months after medical treatment has been stopped. These are usually very old chronic ulcers based on the pancreas and with poor blood supply. The ulcer can be healed by painstaking treatment, but the scar tissue has too little resistance to digestion to remain intact. The third group is the gastric ulcer which either fails to heal completely or recurs after good management. Here again the surgeon finds a thick callous base adherent to liver or pancreas with poor nutrition, analogous in its resistance to healing to chronic varicose ulcer of the leg.

The problem of ulcer treatment has a very definite economic aspect which necessarily determines the choice of management as between medicine and surgery in a certain percentage of patients. Non-coöperative, unintelligent individuals or the laboring man employed in some form of work incompatible with carrying out an accurate medical regime should be operated upon.

RESULTS OF MEDICAL TREATMENT

I reported, at the recent meeting of the American Medical Association, statistics as to the results of medical treatment in 1,130 of the Presbyterian Hospital cases from whom I have reports, 2½ to 18 years having elapsed since treatment. The status of this group this spring as determined by questionnaire and personal interview was as follows: Cured 49.5%, greatly improved 16.7%; or a total of 66% in which a good medical result was obtained. An additional 10% were moderately improved and 20% failed to obtain a good result, two-thirds of the patients in this group having had subsequent operation. It must be noted, however, that we were dealing with cases having an average duration of symptoms prior to coming to the hospital of 7½ years. Also very many of the cases included in this poor-result group were entirely well for years after their course of medical treatment and were operated upon years later because of recurrence. The tendency of ulcer to recur constitutes our most difficult problem. It is relatively easy to heal most peptic ulcers. It is impossible to assure a patient that he will have no recurrence. Until we possess more

exact knowledge of the cause of ulcer, the most effective insurance against recurrence is the eradication of all foci of infection and education of the patient, especially the patient with a familial predisposition to ulcer, to a lifetime of careful eating, adequate exercise and sleep and extreme moderation in the use of tobacco and alcohol.

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POSTOPERATIVE JEJUNAL ULCER*

N. M. ALLEN, M.D.†
DETROIT, MICHIGAN

Complications following the surgical treatment of gastric or duodenal ulcer, where the primary operation was partial gastrectomy or an indirect operation such as gastro-enterostomy are, I think, well recognized. This recurrence of ulcer may occur along the suture line or on the gastric or jejunal side of the anastomosis, sometimes involving the surrounding viscera. The cause of this recurrence is unknown. However, many theories have been advanced, some of which we might mention, as: The use of clamps, unabsorbable suture material, anastomosis being badly placed, mistaken diagnosis such as gastric crisis or hemorrhagic hepatitis, or where no pathology was present, the stroma being too small. Others have stated that in their opinion the cause of these recurrences was the result of some derangement of the sympathetic nervous system, infections from slight perforation at the time of the original operation, the post-operative treatment being too short, the patient not being kept under observation long enough and on the usual diet for a sufficient period of time, the use of alcohol, tobacco, etc.

In a collected group of twenty-one cases, seventeen of which came to operation, on examination at the time of operation, we were unable to determine that any of the above mentioned causes were the true etiological factors in the recurrence.

The use of clamps: We have used clamps for gastro-intestinal anastomosis for many years, and, as far as our observation in this small group of cases is concerned, we were unable to determine that the use of clamps had anything to do with the recurrence; however, devitalizing of tissue by improper application of clamps may be a contributing factor.

Unabsorbable suture material: We were unable to find, either on examination of the specimen removed or at the time of the operation, any unabsorbable suture material, although several cases have been reported where pieces of linen and silk have been removed from the ulcer crater, apparently absorbable sutures or catgut having been used in all cases at the time of the primary operation.

The position of the anastomosis or the size of stoma were not thought to be factors, the stoma approximating the normal caliber of the duodenum or larger.

As to the nervous mechanism or derangement of the sympathetic nervous system, we have no data at hand to either verify or deny these statements.

Infections or slight perforation at the time of operation may be a causative factor in a small group of cases, but, when we consider that one case reported in this group had a primary operation eleven years previously, it hardly seems possible that this particular case may be considered as one with this cause for recurrence.

Use of tobacco and alcohol: All our histories stated this fact but each individual was a moderate user of both or a teetotaler.

All our cases were operated originally for the relief of chronic duodenal ulcer. They were cases that were under observation for a long period of time, some as long as three years, one individual in this group having spent some eight months out of one year in different institutions undergoing either medical or surgical treatment for ulcer.

Bower, Warthin and several other au-

*Read before the surgical section of the Michigan State Medical Society, Benton Harbor, September 16, 1930.

†Dr. Allen is a graduate of Detroit College of Medicine, 1910, Harper Hospital, 1912, Associate Attending Surgeon, Harper Hospital.

thorities have mentioned the possibility of the constitutional make-up of certain individuals as the causative factor of the original duodenal ulcer and possibly the reason for the recurrence.

CASE HISTORIES

At this point it might be well to cite one family. The father and five sons came under our observation, the father and four sons having had an operation for duodenal ulcer, one son being under medical treatment at the present time for this disease. Of the five operated, the father died of perforated duodenal ulcer, the eldest son died after six surgical attempts to eradicate the disease, the second son is reasonably comfortable after two surgical attempts and the other two sons might be classified as reasonably good results. Both the latter cases have been operated for three and four years respectively. The father was a man of seventy years of age with an intermittent obstructing duodenal ulcer for several years, mild diabetes, and hypertension, and double cataracts successfully operated five years ago. He came under our observation with acute perforation. His former attacks of obstruction were treated by rest in bed, and evacuation of the stomach at frequent intervals. Under such treatment the edema and the obstruction subsided and the stomach emptied in the normal time. Early one morning he was seized with very sharp pain in the right upper quadrant, which was diagnosed by his family physician at the time as a gall-stone colic. Later on the same day, the pain became more severe and the patient was admitted to the hospital with the diagnosis of perforated duodenal ulcer and immediately operated. He died twenty-four hours after operation with what was thought to be some cerebral insult.

The oldest son, a man of forty-five years, first had an emergency operation for perforated duodenal ulcer, later a posterior gastro-enterostomy for bleeding duodenal ulcer. Sixteen months later he was operated for marginal ulcer, seven months later gastric resection for recurrence of duodenal ulcer, eleven weeks later excision of a marginal ulcer at the point of resection, and seven weeks later was admitted to the hospital as an emergency because of a perforation.

The next son, a man of forty-one years of age, had a posterior gastro-enterostomy for duodenal ulcer; gastric resection for marginal ulcer, with a reasonably good result. The other two sons submitted to surgical treatment, and, having been operated now for a period of three years, may be classified as fair results.

In citing this particular ulcer group in one family, I think it demonstrates very well the possibility of constitutional ability present in some families to form both duodenal ulcers and recurrences. This particular group, all having had prolonged medical treatment, being submitted to all the types of surgical treatment, two members finally succumbed to perforations.

SYMPTOMS

The symptoms of marginal or jejunal ulcer may be mentioned briefly as: Pain in the upper abdomen, more frequently about the mid-portion of the transverse colon. The symptoms are not clear cut. They do not fit in entirely with those of duodenal or gastric ulcer. Many times they require the administration of opiates for relief of pain. The disease incapacitates much more than does the ordinary gastric or duodenal ulcer; there is marked emaciation, loss of weight, secondary anemia of greater or lesser degree and the individual frequently gives a history of prolonged treatment for duodenal ulcer with surgical treatment and operation of gastro-enterostomy or partial gastrectomy.

The patient is usually unable to carry on his usual occupation. He spends a great deal of his time, because of relief from pain, in a reclining posture, sometimes being obliged to remain in bed for several days at a time.

The individual becomes very irritable and is apt to disregard his medical treatment because of the unsatisfactory results so far received and is very apt to indulge in dietary indiscretions, which is entirely detrimental to his disease. This is a reasonable picture of the ordinary individual with marginal ulcer.

TREATMENT

As to the type of treatment for this type of ulcer, it might be interesting to quote from an article in a British Medical Journal of recent date; 1,500 cases of gastro-enterostomy were reviewed, operations performed by some seventy-eight different surgeons, who tabulated their results after seven years of observation as follows: Gastrojejunal ulcers occurred in 2.7% of the cases, hemorrhage occurred in 2.4% of the group, and 90% of the cases were classified as having good results. This demonstrates, I think, in a large series of cases, that possibly the conservative treatment for lesions of the duodenum is not to be considered lightly. Posterior gastro-enterostomy with or without excision for the treatment of lesions of the duodenum with 90% good results, I think gives as high a percentage of cures as are found in any other branch of surgery. I do not think that the operation should be discarded and substituted by a surgical procedure carrying a higher mortality rate, such as partial gastrectomy or subtotal gastrectomy for the cure of sometimes an intrinsic lesion of the duodenum, when partial gastrectomy does not protect against marginal ulcer. Although the incident of gastrojejunal ulcer can be greatly reduced by careful technic at the time of primary gastro-

enterostomy, it cannot be wholly limited. However, a warning of the possibility of its recurrence will be given sometimes by the amount of free acid as determined by the test meal. If this is unduly high, it is thought by some authorities that the anastomosis should be placed nearer the cardia than usual and the after medical treatment should be more detailed and prolonged.

In our group of cases, no patient was reported who had not had at least two operations for the surgical cure of ulcer. As stated before, one had six operations, another individual four, who also eventually died of perforation, and the last individual in this group three operations. The treatment we have instituted in all of our cases where the primary operation is gastro-enterostomy and the pylorus is patent, is to disconnect the gastro-enterostomy, close the jejunum and stomach, and allow the stomach to empty in its natural way. If there is some stenosis of the pylorus, one of the well known pyloroplasties can be done. If the primary operation has been partial gastrectomy, excision of the ulcer-bearing area and re-establishment of the anastomosis can be resorted to.

CONCLUSIONS

We hardly think it justifiable, in view of our present knowledge of the cause of duodenal and jejunal ulcer, to sacrifice one-half or two-thirds of the stomach for the surgical cure of duodenal ulcer. If the primary operation has been an indirect one such as a gastro-enterostomy, the surgical treatment of the jejunal ulcer is considerably minimized. On the other hand if the recurrence comes following any of the well known gastric resections, we cannot operate directly on this type without accepting a higher mortality rate than with an indirect operation, with no assurance that the condition will not again recur.

We have been in the habit of treating our bad surgical risks, those with marked emaciation, secondary anemia, etc., with primary blood transfusions, and glucose and saline intravenously, to prepare them as well as possible. At the time of operation, as described by Balfour, a small catheter is inserted in the jejunum below the anastomosis so that nutritive solutions can be administered at will and the stomach and anastomosis put absolutely at rest.

PAIN IN RELATION TO NEUROLOGICAL DIAGNOSIS*

CURTIS T. PROUT, M.D.†
Division of Neuropsychiatry, Department of Medicine, Henry Ford Hospital
DETROIT, MICHIGAN

It is often stated that neurologic diseases are rarely encountered in general practice, but I quote a member of a well known clinic in stating that a statistical analysis revealed that out of sixty thousand general cases seen in one year, ten per cent were referred to neurology for some problem requiring neurological investigation, and pain is one of the most common neurological complaints.

While there are many varieties of pain, we shall discuss only those which are most usual and which are closely related to neurology. One of the most common sites of pain is the head, yet with all its frequency little is known of its etiology or of the mechanism of its production. In briefly reviewing the nerve distribution to the dura mater, we find that the anterior portion is supplied by the meningeal nerve, arising from the second or maxillary division of the trigeminal. The anterior fossa is also partly innervated by the anterior and the posterior ethmoidal branches of the ophthalmic division of the fifth nerve. The tentorial nerves also arise from the ophthalmic division and supply the tentorium cerebelli. The dura, covering the middle portion of the cranial vault, as well as the middle fossa, is supplied by the recurrent branch of the third, or mandibular division of the fifth nerve. The dura of the posterior fossa is supplied not only by the tentorial nerves, but also by the meningeal or recurrent branch of the vagus, and some may also come from the sympathetic and hypoglossal as well.

*Read before the Noon Day Study Club section of the Wayne County Medical Society, March 17, 1931.

†Doctor Prout graduated from the Cornell University Medical College in 1924 and interned at the Albany Hospital, Albany, New York, 1924-1925; he was assistant physician at the Manhattan State Hospital, New York City, 1926-1927. From 1927 to 1930 he was a Fellow in Neurology at the Mayo Clinic; he received the M.S. degree from the University of Minnesota, 1929. Since 1930 he has been on the staff in the neuropsychiatric division of the Henry Ford Hospital, Detroit.

Headaches may be due to a wide variety of etiological factors, and for lack of a better way of dividing or grouping them we may classify them as follows:

I. THOSE OF ORGANIC ORIGIN.

A. *In brain disease.*

1. *Cerebral tumor.* The headache is deep, bursting in type and is characteristically worse in the early morning, often waking the sufferer from sleep. It is usually progressive.
2. *Cerebral abscess.* The headache is similar in type to that of tumor, but often is not as severe, and is accompanied by fever.
3. *Meningitis or encephalitis.* The pain is intermittent in type, becoming persistent and severe. While it is localized at first it later generalizes and again has a tendency to localize, usually to the occipital or nuchal regions.
4. *Leutic meningitis.* In this disease the headache is very severe, and it is often the sole early symptom. It is aggravated by mental or bodily exertion, and, like other leutic pains, displays nocturnal exacerbations. It is often occipital or cervical in location.
5. *Cerebral arteriosclerosis with calcification.* With this the headache manifests itself mainly as a sense of oppression, localized to the forehead and is of obstinate character, particularly upon severe exertion. It is associated with an obstinate vertigo, frequently with a loss of intellectual capacity, an appearance of depression, and transient paresthesias.
6. *Epilepsy.* With this the headache appears as a dull, diffuse, transient pain, not uncommonly as an aura. It may resemble migraine.
7. *Traumatic.*
   a. From fracture with direct pressure on the dura, with resultant localized severe headache.
   b. From later formation of adhesions, with also circumscribed severe pain at the seat of the lesion.
   c. Concussion, with diffuse, intense headache, which may be due to damage to the vasomotor center in the medulla, or to possible centers scattered throughout the cortex, regulating the caliber of the vessels.
8. *Multiple sclerosis.* The headache usually appears in the beginning, and again late in the disease. It is usually referred to the eyes, associated with vertigo, with scotoma, and often with diminution of visual acuity, leading to a diagnosis of retrobulbar neuritis.
9. *The headache associated with cervical cord tumor* is due to irritation of the upper cervical nerve and is occipital in location. It may be increased by flexing the head.
10. *Spinal puncture.* This type is included here on the basis that it is a form of trauma. It is usually a severe, throbbing headache, sometimes accompanied by vertigo and nausea with occasional vomiting. It is usually occipital, but may be frontal at times. It is more severe when the patient assumes an erect posture, and is relieved when he is in the prone position.

B. *From diseases of special sense.*

1. *Eyes.*
   a. With eye strain. A dull headache in the forehead and eyes may appear, due to a cramplike, protracted muscular spasm. In seeking to overcome the spasm the sensory nerve endings become irritated.
   b. Inflammatory affections of the eyes, in which the

headache is usually frontal.

2. *Nose, sinuses, and teeth.* The headaches associated with these areas are due to the irritation of the fifth nerve which supplies, as we have already noted, both these areas and the dura. Localized pain in the upper, inner corner of the orbit, or over the eyebrows, usually denotes disease of the anterior part of the nasal cavity, or of the frontal or ethmoidal sinuses. Pain deeper in the head causes one to consider the posterior part of the nasal cavity, or the sphenoidal sinus. Pain in the cheek, or teeth, extending to the nose, points to disease of the antrum or floor of the nose.
3. *Ear.* Acute otitis media. This is accompanied by intense headache, which radiates from the affected area all over the head, and is of a throbbing, pulsating character.
4. *Gastrointestinal tract.*
   a. Fasting, which results in the well-known, dull, generalized throbbing headache.
   b. Hyperacidity, with a headache similar to that seen in neurasthenia.
   c. Constipation. Varying from a heavy, dull ache to a diffuse, severe headache. This is probably due to toxic matters irritating the dural nerves. Perhaps a passive hyperemia may result from straining at stool.
5. *Kidneys.* The two conditions in which nephritic headaches are prone to occur, are chronic glomerulonephritis and, secondly, nephritis associated with hypertension. Here the headache may vary from severe frontal pain or nuchal pain to a sense of oppression. Increase of headache associated with kidney damage is often looked upon as a warning of impending uremia. Here also the pain is due to toxic substances, and in some instances to circulatory disturbances.

II. SPECIAL TYPES OR INDEPENDENT FORMS.

A. *Migraine.* This appears either as a hemicrania, or bilaterally, and is usually frontal, over the eyes, temples, or the root of the nose. It may go to the eyeballs. The pain is dull, very severe and sometimes of bursting character. There is frequently a hyperalgesia of the scalp. The onset is usually in the morning, with a tendency to cease entirely after the fiftieth year. There are usually prodromal symptoms, and at the height of the pain there is often vomiting. The cause is unknown, although many theories have been advanced.

B. *Neurasthenic headache,* which results from over-exertion or mental exhaustion. This often appears only as an oppression or a sense of heaviness and is usually located behind the forehead, downward into the eyes and the root of the nose, and less frequently in the temples. There is sometimes a complaint of a hoop or band sensation, extending around the head, over the temples to the occiput. Sometimes the pain may be of a boring character, or in the form of various stabbings in one place or another. Paresthesias often accompany these headaches and the complaint may persist from months to years, with no tendency to periodicity.

C. *Nodular or "rheumatic" headache.* This usually appears in women of middle or advanced age, who have been free from headache in their youth and childhood, thus distinguishing it from migraine. The pain is persistent, severe, extremely disabling and

involves the whole head. It nearly always begins in the occiput or nape of the neck, and frequently radiates toward the back and shoulders. It does not cease at night and is not associated with vomiting. There is usually a history of exacerbations after exposure. The presence of nodules the size of a millet seed or even a bean, in the subcutaneous tissue, occipital fascia and nape of the neck are said to be characteristic. These are tender and definitely not lymph nodes, because of their irregularity.

III. IN GENERAL DISEASES.

A. *All acute infections.* Here the headaches are usually frontal, but often the entire head may be involved and the pain may be extremely severe. Those diseases particularly noted for the severity of the associated headache are typhoid fever, septicemia, influenza and erysipelas. The pain is due to a direct irritation of the dural nerve endings, with the virus.

B. *Anemia,* in which the headache is usually a sense of oppression.

C. *In diabetes* also the headache usually appears as a sense of oppression.

D. *In pelvic diseases.* There is an intimate relationship between the nasal mucous membranes and the genital organs which makes possible the assumption that many of the associated headaches may be accounted for on this basis.

E. *With endocrine dyscrasias.* These are seen particularly with hypothyroidism, and clear with treatment of the underlying disturbance.

IV. TOXIC, as from alcohol, with a severe, dull, generalized headache.

V. SYMPATHETIC. This type of pain will be described under crises.

Here we shall conclude our review of headaches and turn to other somewhat less frequent but nevertheless important pain types.

Neuralgias are common general diagnoses. By definition neuralgia is a paroxysmal attack of pain in the course and cutaneous distribution of a peripheral nerve, or its branches. It is for the most part, an overworked term which is being used less and less. The two best known types of true neuralgia are:

A. *The trifacial neuralgia,* which may involve any one or more of the three branches of the fifth nerve. The sudden paroxysmal and extremely severe pain limited to the distribution of one or more of these branches and usually associated with a trigger zone is well known.

B. *Glossopharangeal neuralgia,* which is characterized by pain of paroxysmal character between the tonsil and the region of the ear, usually brought on by swallowing and often accompanied by a persistent cough. The diagnosis is easily confirmed if the pain is relieved following cocainization of the tonsillar area.

Perhaps mention should be made of the sphenopalatine or Sluder's syndrome, the entity of which is variously questioned and supported. This is essentially a lower-half headache, with persistent aching pain behind the root of the nose, in the cheeks and occiput, radiating down to the shoulders. Relief obtained by cocainization of the sphenopalatine ganglion is considered as diagnostic.

There are various other forms of neuralgia still diagnosed, but more and more the actual conditions which cause the neuralgic symptoms are being discovered.

Neuritis with actual damage to the nerve fibers results not only in pain as one of the most severe manifestations, but is accompanied also by motor manifestations. The pain is sharp, boring or burning in character and always occurs in the course of the nerve or nerves, accompanied by tenderness.

The forms of multiple neuritis from various poisons and disease are the ones most interesting to us. We may get similar neuritic pains from nerve trunk involvement, from such conditions as neuroma, trauma, inflammation, malignancy, glands, aneurysm or a cervical rib.

The various root pains usually begin as a dull ache, gradually increasing, and are re-

ferred to the peripheral distribution of the neurone. They are usually unilateral at first, later bilateral and symmetrical. The area is not usually tender, but flexion of the head tends to aggravate the pain. The pain will often awaken the sufferer at night, and is frequently relieved by exercise. It is not influenced by weather. Changes in the sensory, motor, and reflex findings may be present. Cord tumor, herpes and spondylitis are examples of origins of this type of pain.

Sympathetic pain has been much discussed of late, particularly in its relation to vascular disease. The onset of gastric crises due to inflammation of the sympathetic rami, with its sudden pain, is rather characteristic. The pain is dull or sharp. It may be aching or cramping, squeezing, gripping, burning, or there may be a sensation of numbness over the area. It is paroxysmal, and is usually accompanied by vomiting. The crises may, however, occur in various places, as in the sacral region, laryngeal region or the gastric region. The sympathetic pains of the head are very similar in type.

Pains of central origin may result from certain types of lesions in the spinal cord, medulla, thalmus or possibly in the cortex. The pain appears below the level of the lesion, in the form of burning, shooting or stabbing pain, is poorly described and poorly localized. The pain in syringomyelia or in cord tumors not involving the roots is usually segmental in type. In syringobulbia with irritation of the spinothalamic tracts above, or in cases of vascular disturbance as in a lesion of the posterior inferior cerebellar artery, this severe burning pain may result in the area supplied by the segment irritated. Pain has been noted from lesions of the pons, as in tuberculoma, and may affect the lower parts of the body; thalamic pains associated with sharp, persistent paroxysmal pains, felt in the hemiplegic side of the body, often intolerable and not yielding to treatment, are one of the described features in a lesion of the optic thalmus. Pain as a result of lesions of the cerebral cortex is a disputed entity and we shall not attempt to describe it.

In this report we have given a brief review of the common types of pain which are of neurological importance. They are not uncommonly seen in general practice and often their significance is overlooked; this is particularly true with respect to the root pains. Not every type of pain has been included in this review, but an attempt has been made to bring before you those most commonly encountered, and those which have the greatest significance.

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MODERN TRENDS IN ANESTHESIA*

FRANK J. MURPHY, M.D.†
DETROIT, MICHIGAN

In a discussion of modern anesthesia it is well to bear in mind one historical point of importance, *viz.:* Anesthesia was first undertaken to lessen the discomfort and pain suffered by a patient during a surgical operation. Naturally, it was found that with an anesthetized patient more extensive and satisfactory work became possible for the surgeon. Thus anesthesia has increased the extent and the usefulness of surgery.

It must be borne in mind, however, that this indirect benefit to the surgeon is really a by-product of anesthesia, the primary purpose of which is to make the lot of the patient an easier one. When the nervous, apprehensive patient is given a spinal anesthetic for a laparotomy, in the face of his protests that he wishes to be asleep, and when a general anesthetic is in no way contraindicated, it cannot be considered good anesthesia, although the relaxed muscles and quiet field are ideal for the purposes of the surgeon. I do not advocate consulting the patient as to what sort of an anesthetic he shall have, any more than I would advocate asking him what sort of an incision should be made, or what sort of instruments to use, but I do advocate allowing the temperament of the patient, as well as his physical infirmities, to add its weight as a factor in the choice of an anesthetic.

Each patient presents an individual problem. No one method or agent is suitable for all needs, and such will not be the case until the ideal universal anesthetic has been discovered. It is the wise anesthetist who suits the anesthetic to the patient, rather than the one who forces the patient to fit the anesthetic.

All anesthetic agents and methods have their own merits and all have their contraindications, and the modern tendency is to use two or more forms of anesthesia in conjunction, so that use may be made of the more outstanding virtues of each. This method of combined anesthesia also makes it possible to use smaller doses of each agent, and in anesthesia the minimum dose is the desirable one.

In addition to the proper agent and method, another requisite of good anesthesia is the coöperation of surgeon and anesthetist. It may be necessary that the patient have no ether, but that he be well relaxed, and yet a general anesthetic is indicated. In such cases, if the surgeon is willing to use some local infiltration, with a gas anesthetic, the problem is solved. The benefits of harmony among the members of the surgical team accrue to all concerned, including the patient.

If it is necessary to be able to vary the agent and method to suit the case, it follows that it is also necessary to have adequate apparatus and instruments available.

It should be clearly understood that no mechanical appliance can give an anesthetic. To do this requires experience, judgment, skill and resourcefulness, which attributes are not possessed by any form of apparatus. It is highly desirable, however, that the anesthetist, having arrived at a decision as to what he wishes to do, have at his command the best means of carrying out his desires. Anesthetic deaths have resulted from the lack of adequate means of meeting and overcoming emergencies, and, in spite of our best efforts, emergencies do occur.

The cost of complete and up-to-date apparatus should not be considered when dealing with human life. Industry does not hesitate to adopt new machinery when benefits will result therefrom, and neither should medicine. Hospitals are increasing in number and efficiency. The modern hospital looks upon it as good business to install the latest and most complete laundry machinery, cleaning equipment and kitchen utensils. It is equally good business to install modern anesthesia apparatus, aside from the fact that the anesthetist should have such apparatus with which to work, and the patient should have the benefit of its use.

A properly conducted anesthesia consists of more than merely pouring ether on a mask. If this were not the case, anesthesia would present no difficulties, and, regardless

*Presented before the Surgical Section of the Michigan State Medical Society, Benton Harbor, September 16, 1930.

†Dr. Murphy is a graduate of McGill University, Montreal, Canada. He is in charge of the Division of Anesthetics at Harper Hospital, Detroit. His practice is limited to anesthetics.

of the condition of the patient or the surgical procedure to be undertaken, every anesthetic would be uniformly satisfactory to all concerned. It still happens that the patient, for some reason, "didn't come out of the anesthetic." Happily this untoward occurrence is becoming more rare, and the reason is, anesthetics are receiving more attention and are more skilfully given, with better mechanical aids to their administration. Anyone receiving an anesthetic has a right to the best anesthesia procurable, and good anesthetics are not procurable where there is inadequate apparatus.

The modern tendency in all things is toward specialization. Anesthesia has not as yet attracted large numbers of doctors to its ranks, but it has its rewards to offer those who interest themselves in it. Haphazard anesthesia has long been the rule, even in some of the larger centers. Anesthesia was looked upon as a necessary evil, and was turned over to the interne who was too junior to be allowed to do anything else in connection with the operation. Having been neglected by the medical profession, the possibilities of anesthesia have been seen by the nurses, and the majority of anesthetics in this country are now administered by nurses who have received more or less special training.

A discussion of the merits or demerits of the use of these anesthetic technicians is not proposed, but there is no doubt that the nurse who has had training and experience in anesthesia is more reliable than the doctor who has not had such training or experience.

An advance has been made in those hospitals where a department of anesthesia has been formed, and placed under the direction of a doctor who has been specially trained in anesthesia, and who limits his practice to this specialty. It would be well if their example were more widely followed. As more hospitals adopt this system, there will be a demand for more specialists. The result will be a development of the art and science of anesthesia to a higher degree. The fate of the patients will not be left to chance. Unexplained anesthetic deaths will become things of the past, and there will be less guesswork about what is happening to the patient during the time the operation and anesthesia are taking place.

Patients who receive the most perfect anesthesia have the most uneventful recoveries, so that anesthesia will lose much of its terror for the layman when good administrations become the rule. In this regard, it is well to call attention to general anesthesia as used in dentistry. The dentist who attempts to administer a general anesthetic and perform an extraction by himself, is a menace. Scarcely less so is the one who has the help only of an untrained office assistant. The routine procedure in the offices of such men is to asphyxiate the patient, rather than to anesthetize him. I recently came in contact with an exodontist who seemed rather proud of the fact that he had not had a tank of oxygen in his office for the past five years. To administer a good gas anesthetic for a dental operation is among the most difficult of the anesthetist's tasks, and yet this branch of the work is rarely considered by the medical profession.

A most important factor in the consideration of an anesthetic, is control. The anesthetist should at all times be able to vary the depth. He should have access to the patient, so that he may meet emergencies, or, better, prevent them. Control allows the anesthetist to direct the progress of the anesthesia. Lack of control allows the idiosyncrasies of the patient and the exigencies of the occasion to lead the patient, the surgeon and the anesthetist into dangerous and trying emergencies.

Agents and methods which require the administration in one dose of sufficient of the anesthetic to last for the duration of any lengthy surgical procedure, are to be recommended only when specifically indicated, since with their use control is at a minimum. No matter how safe any anesthetic drug may be, the fact that it is sufficiently potent to interfere with the transmission of nerve impulses or to compel a cessation of practically all but the vital functions of the whole body, is indication for the exercise of extreme care with regard to its dosage.

The patient who has had a just sufficient amount of the anesthetic has a far better and less eventful recovery than the one who has been saturated. A combination of anesthetics allows us to use moderate doses of each, and thus makes for increased safety.

It has been pointed out that the routine use of any particular agent or method for all cases is poor anesthetic practice. Similarly it would be poor practice to use a single

agent or method even for all cases where the proposed surgical procedure is substantially the same. Other circumstances vary, and everything must be considered if we are to give the patient the benefit of the best possible anesthesia. As different drugs possess different outstandingly desirable properties, a combination in which the optimum action of each drug is secured would be ideal.

Local infiltrations of novocain produce anesthesia and considerable local relaxation, but do not produce unconsciousness, and the effect does not always last long enough to allow completion of the surgeon's work.

Subarachnoid injection of the anesthetic drug produces perfect anesthesia and relaxation below the level supplied by the affected part of the cord, but it does not produce unconsciousness and cannot be relied upon beyond a period of from 45 to 60 minutes. It may be repeated, but I have yet to see the surgeon who is willing to have his patient turned over and reinjected in the middle of a laparotomy. Spinal anesthesia produces a marked fall in blood pressure, and a great many patients are nauseated, apprehensive and extremely uncomfortable, even though they do not actually feel the manipulations of the operator. The so-called "spinal headaches" which are severe and intractable, follow this method frequently enough to make their occurrence a consideration.

Rectal anesthesia cannot be controlled with sufficient certainty to make it a method of choice. Gwathmey's colonic analgesia for use in obstetrics has a definite value, but it must be noted that it is essentially an analgesia, and not an anesthesia.

Satisfactory intravenous anesthesia is not yet an accomplished fact. Sodium amytal has been used intravenously in many thousands of cases, but those most familiar with its use advocate it as a hypnotic rather than as an anesthetic. In the intravenous method, control is lacking.

Inhalation anesthesia is still the method of choice in a vast number of cases. Skillful administration of the drug used allows very accurate control of the depth of anesthesia, and the unpleasantness and after-effects may be minimized.

The scope of this paper does not include a full discussion of the pharmacology of all the anesthetic drugs, but it would be well to urge the abandonment of the use of ethyl chloride and chloroform, except when very specifically indicated, and then only by one skilled in their administration.

Nitrous oxide is the most pleasant to take of all the inhalation anesthetics. It may be given to practically any patient, provided it is given with sufficient oxygen. There are virtually no pathological conditions which contraindicate its use. Practically, however, it often falls short of the ideal. Nitrous oxide will not produce muscular relaxation. This point must be borne in mind when considering it for use in any given case.

Ethylene produces more muscular relaxation than does nitrous oxide, and less than ether. The principal objection to its use is the fact that it is highly explosive. It has, also, a rather unpleasant odor.

Ether may still be said to be the most reliable anesthetic for the largest number of cases. It is not as toxic as chloroform, is readily available, and produces satisfactory muscular relaxation. Used for induction, it is unpleasant to take, and it is often followed by rather severe nausea and vomiting. This latter effect may be largely controlled by the thoughtful and careful preparation of the patient and by the use of a method which will allow the anesthetist to quickly de-etherize the patient after the operation. Avoidance of saturation during maintenance also prevents nausea.

With the use of any inhalation anesthetic, results depend very largely upon the method of administration and the skill with which it is carried out.

Any discussion of modern anesthesia would be incomplete without at least a mention of carbon dioxide. Whereas this gas is not used for its anesthetic properties, it has come to be regarded as an almost indispensable adjunct to anesthesia. Carbon dioxide is the normal physiological stimulant to respiration. It increases the amount of oxygen carried by the blood, according to some investigators. Anesthesia is deepened, because more thorough aeration of the blood follows the increased respiration. Induction time is shortened in inhalation anesthesia. Recovery is made more rapid. This rapid recovery lessens the incidence and severity of postanesthetic nausea and vomiting. The gas may be accumulated in a rebreathing apparatus, or it may be given from a tank, with the anesthetic. It must, of course, be given directly to have any ef-

fect during induction, or at any time before there has been an accumulation in the rebreather. For this reason it is necessary to have a cylinder of the gas available, either pure or in a mixture with oxygen. Since the needs of patients vary, it is best to have the pure gas so that it may be given in the optimum proportion in each case.

In dealing with the subject of anesthesia as a whole, rather than with any particular drug or method, the purpose of this paper has been, not to announce any new discoveries, but to bring to the attention of a group of surgeons some of the factors which are to be considered in the choice of an anesthetic for any given case. I wish to emphasize the necessity for coöperation between surgeon and anesthetist, and to discourage any tendency toward routine in anesthesia.

THE USE OF IODIZED OIL BY THE SANATORIUM PHYSICIAN IN THE DIAGNOSIS OF BRONCHIAL AFFECTIONS

STUART PRITCHARD, M.D.†
Medical Director, The W. K. Kellogg Foundation
BATTLE CREEK, MICHIGAN

In the diagnosis of pulmonary affections the sanatorium physician has many problems to solve. Visualization of the bronchial tree with some opaque substance such as iodized oil, has been a great help, and many cases, which previously were in diagnostic doubt, have been definitely tabulated.

Sicard and Forestier, first employed iodized oil in 1921 as an aid in locating and demonstrating obstruction of the spinal canal and later it was used successfully by the originators in exploring dilatations, fistulous tracts, and cavities of the bronchial tree. Later Sargent, Cottenot, Nigoul-Foussal, Ballon, Archibald, and others became interested in this diagnostic aid.

In 1924, the writer[1] first employed iodized oil in the form of bronchial injections as a diagnostic agent.

The iodized oil (lipiodol) which we have used continuously is a chemical compound of forty per cent iodine and oil of poppy seed described and used by Forestier. The oil and iodine are so closely combined that the ordinary starch test fails to show evidence of free iodine.

Iodized oil is of clear amber color, is neutral in reaction, has a specific gravity of 1.350 and is insoluble in water or alcohol. The iodine may be liberated by the alkaline carbonates of the saliva and intestinal secretions, but is not affected by the gastric acidity. It becomes brown when exposed to the action of light, air, humidity, and high temperature, because of the liberation of iodine, and when found in this condition should not be used. The high iodine content of the compound renders it opaque to the roentgen rays. The value of the oil as a diagnostic agent is due to its resistance to the roentgen ray and to its tolerance by the bronchial mucous membrane. The therapeutic advantages are due to the slow rate of absorption of the contained iodine without harmful effect on the patient. Iodism does not occur unless the oil is swallowed and subjected to the action of the intestinal secretions. The slow liberation of iodine prevents the danger of pulmonary congestion, which sometimes follows the use of iodides.

There are four methods of introducing iodized oil into the bronchial tree: namely, the supraglottic, the transglottic, the subglottic and the bronchoscopic. In the subglottic method a hollow curved needle is passed through the cricothyroid membrane into the trachea, while in the fourth the oil is introduced through the bronchoscope.

The following general principles should be observed in all methods:

1. The use of discolored oil should be avoided.
2. Warm oil should be used, as it flows more freely and lessens the tendency toward cough.
3. Roentgenographic exposures should be made as soon after injection as possible

†Dr. Pritchard is Medical Director of the W. K. Kellogg Foundation, Battle Creek, Michigan: He is a graduate of the Medical Department of the University of Toronto, 1905; vice president of the National Tuberculosis Association. He specializes in diseases of the lungs.

and cough should be prevented by any unnecessary movements of the patient.

The sanatorium physician will find the supraglottic method the most satisfactory in the great majority of adult cases on account of the following reasons:

1. The method does not require the services of a trained specialist such as an otolaryngologist, or surgeon, and the technic can readily be acquired by the internist, the general practitioner, or radiologist.
2. The method is less complicated, time-saving, and causes the patient less strain and worry.
3. Little or no inconvenience is experienced by the patient after the injection.
4. In over six years' experience with this method no ill effects have occurred.
5. The method may be employed in the fluoroscopic room, office, or hospital, with less inconvenience to patient and physician.
6. Any part of the bronchial tree may be visualized by this method.

Disadvantages of the supraglottic method:

1. Not very satisfactory when attempted on children.
2. In cases of lung abscess or other pulmonary lesions with destructive changes or cavity formation, the oil does not penetrate by gravitation, as compared with the excellent results obtained by bronchoscopy.

I. *Procedure.*—From 1910 to 1913 the writer used the supraglottic method in administering intratracheal injections of one-half of one per cent menthol dissolved in a hydrocarbon for the purpose of emptying bronchiectatic cavities. The patients were placed in the recumbent position and no anesthesia or laryngeal mirror was used. In 1924, this same method was employed with lipiodol, except that in many cases a local anesthetic was used and the patient was placed in a sitting position. However, it was soon found that the original technic of 1910 was preferable.

It is possible, when a local anesthetic is used in the pharynx or larynx, that some spastic reaction occurs lower in the bronchial tree, on account of the fact that a more extensive and satisfactory visualization appears to occur when no anesthetic is used.

II. *Instruments Required.*—No laryngeal mirror is necessary. The fewer instruments used in the mouth the better. A head mirror is helpful but not essential. In our experience the syringe used should be all metal, 30 c.c., with two rings attached to end of the barrel and one on piston. An all metal flexible cannula with large caliber, almost six inches long, slightly bent at extremity, is most satisfactory. With this type of syringe one has the advantage of heating the oil in the syringe by placing the latter under the hot water tap. Fifteen c.c. of oil will just half fill the syringe, so that the rings are not far apart and easy to manipulate when cannula is held in position. The cannula should not touch any part of tongue or pharynx.

III. *Position of the patient.*—The patient should be placed in a recumbent position on tilting table, lying on the side to be injected. Two pillows are placed under the lower shoulder and three used to elevate the head. This places the patient in a semi-recumbent position. The tongue is protruded and caught in a cheesecloth handkerchief, being held in this position by the patient using the lower hand.

IV. *Technic.*—Use much psychic anesthesia by stating what you intend doing. Explain carefully that no operation is to be performed, no pain caused, and instruct the patient that he or she must refrain from coughing or swallowing. Complete relaxation is necessary and to ascertain if the patient is relaxed note the position of the tongue when it is extended. A high longitudinally arched tongue means tension on the part of the patient and that little or no success will be the result. The back of the tongue must be relaxed and "flattened out" before proceeding with the injection. The slightly bent end of the cannula is placed over the back of the tongue a little towards the side opposite the pillow. The patient is asked to breathe deeply and quickly. The oil is allowed to flow continually. The whole time of "pouring" should not take more than two minutes. The patient is then asked to take a few deep breaths. In this way a more extensive visualization may be obtained. If the middle or upper portions need investigating, level the patient immediately after the injection and tilt the chest and head downwards for about half a minute. The following suggestions may prove helpful:

1. The oil should be warmed, which will facilitate flowing and cause less reflex action.
2. The X-ray should be adjacent.
3. A fluoroscopic study should be made

after stereoscopic films are made, as time is a factor. On fluoroscopic study note if any oil was swallowed. If so, give hot water and soda (emetic). Do not let the oil reach the alkaline intestines.

4. An oblique or lateral chest film should be made in all cases, as the postero-anterior chest stereoscopic study does not show all the involvement in the majority of cases of bronchiectasis. Frequently more extensive dilatations are found by an oblique or lateral study.

Uses.—1. In cases of long-standing bronchitis with little or no expectoration and indefinite etiology.

2. In cases of chronic cough with purulent expectoration and little or no X-ray abnormality.

3. In cases of chronic cough with a previous history of pneumonia or foreign body.

4. In cases of bronchiectasis for the purpose of mapping out affected bronchial dilatations.

Contra-indications.—In 1926[2] the following exceptions to the use of iodized oil in bronchial visualization were suggested by us and now after a much greater experience it is felt that there is nothing to add or omit.

1. Acute respiratory affections such as rhinitis, pharyngitis, bronchitis.

2. In cases of acute or active tuberculosis.

3. Very extensive and advanced pulmonary suppuration, particularly when the patient is extremely weak.

4. Advanced circulatory complications such as angina pectoris, aneurysm, and cardiac decompensation.

5. Recent hemoptysis.

CONCLUSIONS

All methods of visualizing the bronchial tree are worthy of consideration and appreciation. All have their specific advantages. The supraglottic method is perhaps the most uncomplicated, simple, and time-saving, for the sanatorium physician, the general practitioner, and the radiologist to consider.

In cases of differential diagnosis of foreign body, malignancy, and the visualizing of lung abscess, the bronchoscopic method is of much greater value.

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TWO UNUSUAL CASES OF NERVE INJURY

I. BULLET IN MEDIAN NERVE

II. SECTION OF FEMORAL AT OPERATION

E. S. GURDJIAN, Ph.D., M.D.
DETROIT, MICHIGAN

Nerve injuries are common in large industrial centers as well as some of our larger cities where bullet and stab wounds are frequent. In the next few paragraphs, we should like to give the story of two cases of nerve injury which present certain unique aspects. One patient had a median paralysis following a bullet wound of the upper arm, and the other noticed complete paralysis of the anterior thigh muscles after an incision and drainage of an extensive inguinal abscess.

Case 1.—Bullet wound of the upper arm. Bullet shadow of medial aspect of upper third of arm by X-ray. Fracture of lower third of humerus, in good position. Clinically, median nerve paralysis. Operation. Bullet found in the substance of median nerve in upper third of arm, pressing against the musculocutaneous nerve.

C. J. (H-17616). Entered the Receiving Hospital, Detroit, 12/13/30, with a history of bullet wound six weeks previously. He thought that the bullet was still in the upper third of his left arm. At the time of injury he was treated for fracture of the lower end of the humerus. Since then, he had noticed a numbness of the hand in the median distribution, and general weakness of the entire left upper limb.

Regional examination showed the presence of a hard mass about the size of a bullet on the medial aspect of the upper third of the left arm, about 3" from the axilla. There was also some callous formation at the lower end of the humerus. The movements about the shoulder joint were normal. At the elbow, both flexion and extension movements were weak. In the forearm supination and pronation were definitely impaired. In the hand flexion of fingers was practically absent, particularly in the

thumb and next two fingers. Dorsiflexion at the wrist was present but much weakened. There was marked swelling of the entire hand with slight cyanotic discoloration. Anesthesia was present in the median nerve distribution of the hand. This involved the volar surfaces of the lateral three and one-half fingers as well as the tips of the fingers on the dorsal aspect. X-ray examination showed presence of a metallic fragment in the soft tissues of the upper third of the arm, medially.

A diagnosis of median nerve palsy was made. At the time, it was suggested that the foreign body had either sectioned the median nerve or was pressing against it, and thus caused chronic irritation. Operation was performed December 15, 1930. The accompanying figure shows the operative findings. The bullet, curiously enough, was embedded longitudinally in the body of the median nerve, by splitting it in its central portion. There was also pressure against the musculocutaneous nerve, explaining the weakness in the power of flexion at the elbow and the weakened supination of the forearm. After removal of the bullet, a careful neurolysis was performed.

The post-operative course was uneventful. Much to our surprise, sensation returned to the median distribution of the hand in about three days. The movements of flexion of the fingers were much better within a week. Patient was seen about three months after operation, and at that time there was practically complete return of function in the hand.

It is unusual to conceive that a bullet would actually stop in the substance of a nerve after splitting it. Such cases have been reported (Stookey, '22). When encountering such an instance, it is important to note the extent of damage to the nerve, and to be sure not to injure it any further. The neurolysis should be performed with great care. If there is considerable damage, it may be necessary to separate the damaged portion from the uninjured part of the nerve and suture the former, *leaving the latter alone.*

Case 2.—Inguinal abscess 5 months before admission. Incision and drainage. Numbness on the medial aspect of the thigh and leg, as soon as patient recovered from anesthetic. Complete femoral palsy at the time of examination. Operation. Section of femoral nerve found. Good post-operative recovery.

H. J. (H-14323). Entered the Receiving Hospital on 10/8/30, complaining of weakness in the right thigh, and numbness in the anteromedial aspect of the thigh, and the medial aspect of the leg. He stated that about five months before admission he had an abscess in the right groin which was opened and drained. Since that time, he noticed a numbness in the limb, and his thigh became much smaller. Examination showed several scars on the abdomen, due to previous operations, and a scar over Poupart's ligament, on the right. There was an area of anesthesia in the distribution of the femoral nerve, the anesthesia extending down to the ankle on the medial aspect of the leg. There was tremendous atrophy of the extensors of the knee and the flexors of the hip. The tensor fasciæ latæ muscle contracted. The quadriceps femoris was practically gone. The adductors contracted. The flexors of the knee were in good condition. The gluteal prominences were equal on the two sides and there were no localized atrophies on the posterior aspect of the pelvis. The femoral pulse was present. There was no evidence of anesthesia beyond the distribution of the femoral nerve. The knee jerk on the right side was absent. The Achilles was present. A small ulcer was present on the anterior aspect of the knee, which patient stated, "would not heal."

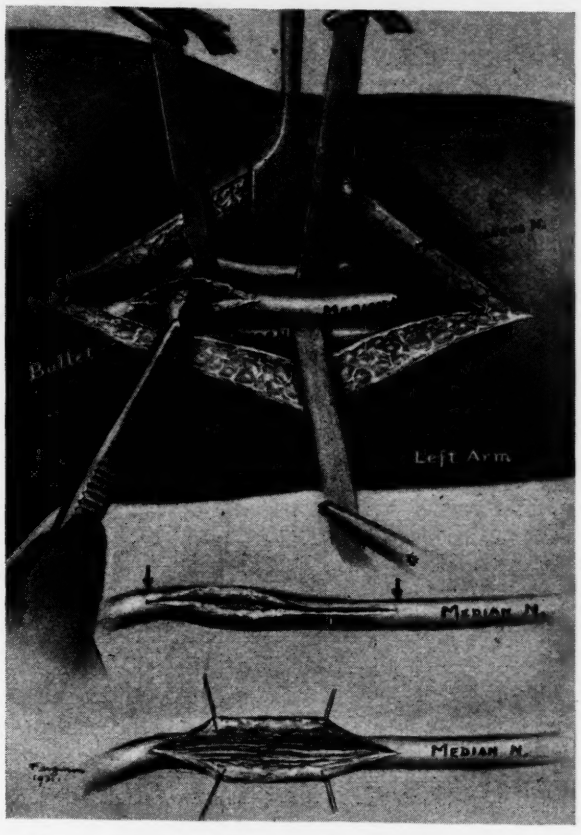

Fig. 1. Bullet in the substance of the median nerve. Also the final result after neurolysis. The bullet was found to press against the musculocutaneous nerve, which explained the weakness of the biceps contraction.

In view of the immediate anesthesia in the leg following operation five months before, the possibility of injury to the femoral nerve, at that time, was carefully considered. The condition had become one of total interruption of impulses through this nerve.

We advised operation in this case because it was thought that in the course of five months the patient should have had at least some sensory return over the femoral distribution. It was thought possible that the nerve was sectioned at the time of operation or that there was much scar tissue formation about the nerve for which a neurolysis was in order. Accordingly, on 10/10/30, patient was operated. An incision was made on the right, about four inches long, along the adductor canal and crossing Poupart's ligament, extending about two inches above it. On reflecting the skin flaps, it was noted that the sartorius muscle was sectioned at the previous operation. The ends of this muscle were separated, to be sutured later. By means of blunt dissection the branches of the femoral nerve were dissected out on the lateral aspect of the femoral artery and the

peripheral stump of the femoral nerve was located. It was found to be severed practically throughout its entire extent from the central portion. An incision was then made into the aponeurosis of the external oblique muscle parallel to Poupart's ligament, after which the latter was incised vertically to expose the neurovascular region. By reflecting the lower end of the peritoneal sac off the posterior abdominal wall, the iliopsoas muscle was exposed, with the overlying femoral nerve and iliac vessels. The central stump of the nerve was found to be laterally displaced with a bulbous enlargement at the end, characteristic of a neuroma. About as much as three-quarters of an inch of the central stump had to be cut away with a Gillette razor in order to obtain normal appearing bundles of nerve tissue. There was only one bundle which extended from the central to the peripheral part of the nerve, and this was saved by dissecting it away. The peripheral end was also shaved off until fairly normal appearing tissue was encountered. When we were about to approximate the peripheral and the central ends, it was noted that a gap was present, about two and one-half inches between the two. In order to bring the ends together, the hip was flexed to about forty-five degrees, and in this position the nerve ends were sutured by means of 00 catgut. Eight interrupted sutures were used. Following this, the fascia of the

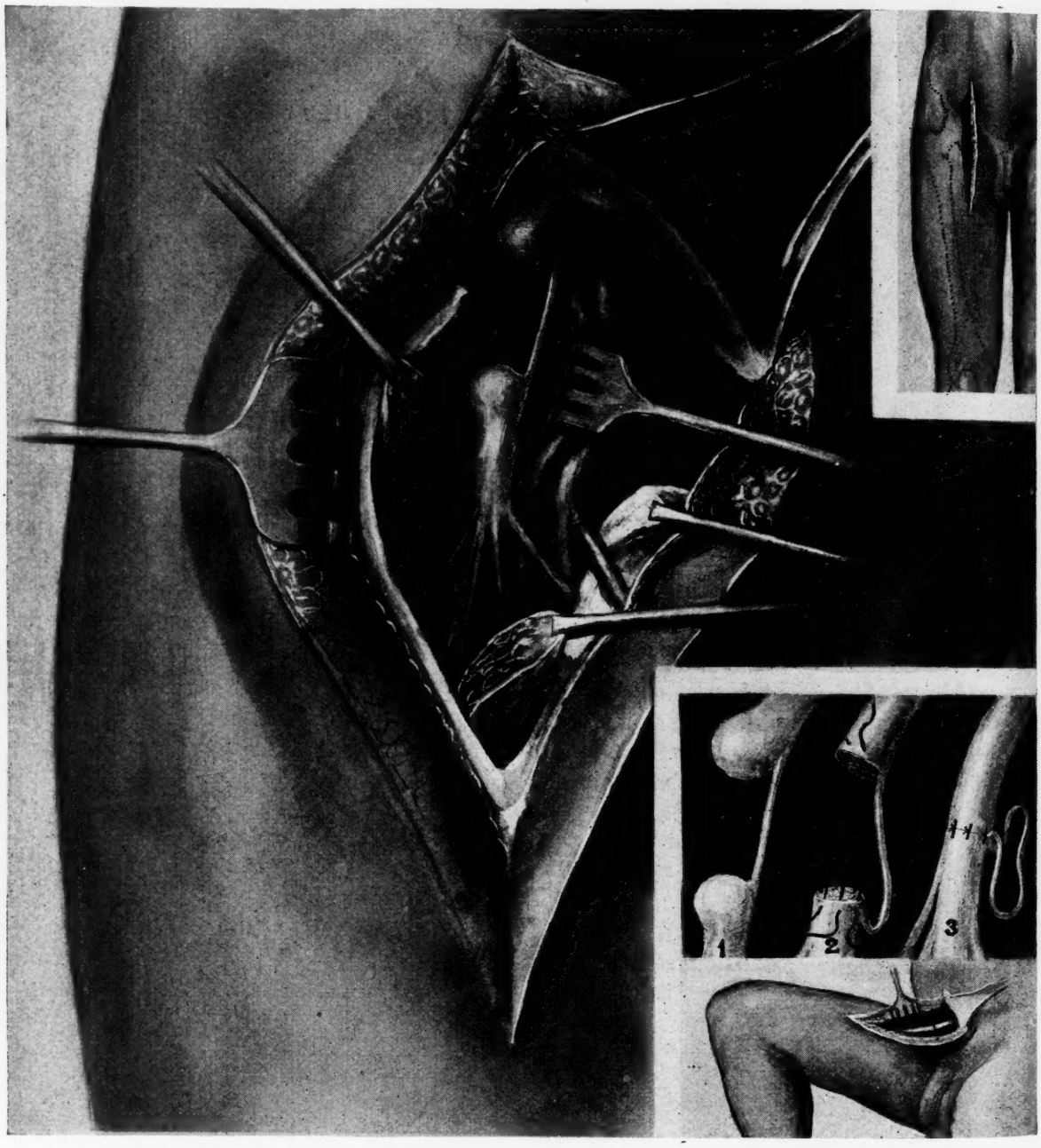

Fig. 2. The operative findings in Case 2 and the operative treatment instituted. The position of the initial incision may be seen in the right upper corner. The large drawing shows the operative findings. The femoral nerve is almost completely severed. This is at the level and just a little above the inguinal ligament. The unsevered portion of the nerve was carefully saved as shown in the right lower corner (upper section). The neuromatous mass at either end was shaved with a Gillette razor until normal appearing bundles obtained. The nerve was sutured in the usual manner after placing the limb in flexion as shown in the lower section of the figure.

external oblique was sutured and the Poupart's ligament repaired. The patient was placed in a body spica to hold the limb in flexion in relation to the trunk. Post-operative course was essentially uneventful.

At the end of three weeks, the cast was removed to be replaced by a new one, and at the time it was noted that sensation had returned to the medial aspect of the right limb. The patient was seen about seven months after operation, at which time he was able to flex the thigh without much difficulty and there was an increase in the circumference of the middle and upper thigh, the measurements amounting to three-quarters of an inch. Whereas, before, patient complained of his knee giving way from under him, he now was able to propel himself without the use of a cane. The ulcer about the patella had completely disappeared. The knee-jerk at this examination was obtained on the right.

A point which should be emphasized and which is well brought out in this case, is the saving of nerve tissue, however small in amount, if it is found to extend from the upper end to the lower, in cases of incomplete section. We think that this was responsible, in this case, for the return of sensation in the distribution of the medial femoral cutaneous and the saphenous nerves.

DISCUSSION AND SUMMARY

Particularly the second case affords much ground for discussion. It is possible that the purulent process actually dissected its way between the vessels and the nerve and pushed the latter toward the skin, for in the normal case it is difficult to conceive an injury to the nerve without accompanying tear of the vessels after an incision along the Poupart's ligament. The fact that the sartorius muscle was found sectioned, and also the fact that a portion of the nerve was still intact, along with the appearance of a disability immediately after operation, favors the assumption the nerve was cut when opening the abscess. Probably circumstances were such that this could not have been avoided. However, we think it is worth while when operating on extremities, to keep in mind the position of certain nerves. More superficial than the femoral are the peroneal nerve, near the head of the fibula, and the ulnar, on the medial aspect of the elbow. Frequently, it may be advisable to dissect out these nerves and thus protect them. Particularly when a second operation is being performed and there is much scar tissue and matting together of structures is it advisable to dissect out the nerve first to prevent injury.

Both cases manifest the importance of saving as much of the uninjured portion of the nerve tissue as possible. Even small bundles, if saved as in the second case, may afford return of some function. In the latter, the saving of the small nerve trunk, we think, was responsible for return of sensation in the distribution of the medial femoral cutaneous and the saphenous nerves. Such uninjured portions of nerve tissue may be easily saved by dissecting them up and down with a very sharp instrument. In secondary sutures, it is essential to remove all neuromatous tissue. This may be done by the method described by Lewis, Stookey and others. With a sharp Gillette razor the neuromatous portion may be sectioned until normal appearing bundles are obtained. Occasionally, large gaps may thus be produced, and in order to afford end-to-end suture it may be necessary to dissect the nerve far out, or flex certain parts, or extend others. It is the consensus of opinion (Stookey, Lee and others) that only end-to-end suture may be expected to result in success.

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RESPONSIBILITY OF COUNTY MEDICAL SOCIETIES IN LEGISLATIVE ACTIVITY*

A. H. WHITTAKER, M.D.†
DETROIT

To understand properly the need for a general effort in developing and controlling legislation, it is necessary to have a clear understanding of the relation of the Profession and the general public to the various agencies which are concerned with the health of the public. Dr. E. C. Winslow in "Whither Mankind," has traced the history of medicine, pointing out the rapid change in the practice of medicine. He says the Scientific Age is still in its infancy and medicine is no exception to the general rule, both curative and preventive medicine having made rapid strides. The modern phase dates from 1842, when, in England, Edwin Chadwick made a report on the sanitary condition of the laboring population of Great Britain. There was enough truth in Chadwick's conceptions of the relation between filth and disease to make them work. As water supplies were improved and age-long accumulations of filth were cleared away, plagues and pestilences of earlier days, cholera and typhus, gradually disappeared.

In the '80's, following the work of Pasteur, came the golden age of bacteriology. Of the entire group of acute communicable infections, only pneumonia and influenza have remained as still beyond the scope of effective control.

At the beginning of the twentieth century, the third line of attack was initiated, along with the rapid improvement in the teaching in the medical colleges, namely, development of an organized program of popular education and principles of personal hygiene.

The program for control of tuberculosis was successful, and was followed by one to control infant mortality, then venereal disease, mental disease, heart disease—and, recently, cancer.

The specific diseases leading in the cause of death have changed entirely, so today, we are dying of heart disease, cerebral hemorrhage, nephritis and pneumonia. Thus, the successes of earlier campaigns and the chronic nature of the present diseases have resulted in efforts by various branches of the government, national and local, by groups of laymen and by groups of graduates of various schools of healing, to assume a greater and greater control of public health.

STATEMENT OF FUNDAMENTAL PRINCIPLES

As a fundamental principle we must realize that our attitude toward governmental functions must be determined in the light of practical, permanent public benefit and public service. At the same time we are thoroughly convinced that any proposition for the relief of present ills or for the adjustment to present conditions which would modify or interfere with the present and established relationship between the physician and his patient is unsound and impractical.

Any proposal which would lessen or destroy the full privilege or complete freedom of the individual in his choice of his physician is likewise unsound. Furthermore, no proposition which would even incidentally or ultimately result in less efficient medical service or in the deterioration of the standing of the medical profession in its relation to the public, can be countenanced. Therefore excessive restrictions, over-burdensome regulations, state practice of medicine, health insurance, paternalism, in whatever guise, are wrong, should be opposed and must ultimately fail.

Certain obligations have been imposed upon our profession by the state or nation in return for the right to practice medicine. Some of these are not only irksome, but impose an unfair burden. There is, however, no question as to the right of the state to impose reasonable requirements and there is no other tenable position but acquiescence; at the same time the matter is clarified if the burden is properly distributed, and the reciprocal obligation of the public taken into consideration.

*Presented before the meeting of the county secretaries of Michigan, Ann Arbor, January 22, 1931.

†Dr. A. H. Whittaker is a graduate of Ohio State University, Medicine, 1917; Internship Roosevelt Hospital, New York City; his present Hospital appointments are: Junior Attending Surgeon, Harper Hospital, Detroit; Associate Surgeon, Children's Hospital of Michigan; Associate Surgeon, Detroit Receiving Hospital; Associate Surgeon, Evangelical Deaconess Hospital, Detroit.

Furthermore to grasp clearly our relationship to the public, it is necessary to have a proper understanding of the governmental agencies controlling practice.

A. The President
- Treasury Department, Public Health Bureau Department
- Department of Agriculture—Bureau of Animal Husbandry
- Bureau of Chemistry
- Bureau of Entomology
- Medical Corps. U. S. Army
- Medical Corps. U. S. Navy
- Department of Commerce, Census Office, Vital Statistics
- Narcotic Bureau

Congress—Health Laws, Licensure, animal experimentation, etc.

Supreme Court—Influence on Medicine through decisions.

The following divisions of government endeavor to better the health of all citizens:

B. State—
1. State Board of Health
2. State University—University Hospital
3. Tuberculosis Hospitals
4. Insane Hospitals
5. Crippled Children's Work

County—
1. Health Units
2. County Clinics
3. County Hospitals
4. County Tuberculosis Institutions
5. Children's Hospital
6. Coroners

City—
1. Public Health Department (Mayor and Council)
2. School Health (Board of Education)
3. City Physician's Office
4. Tuberculosis Work (Department of Health)
5. Cancer Work (Board of Health)
6. Sanitation
7. Medical College (Board of Education)
8. Receiving Hospitals
9. Venereal Clinic (Board of Health)
10. City Hospital Beds in Private Hostals
11. Welfare Department

In addition there are nineteen agencies in each large community supplementing the work of the physician—

Department of Health { Tbc; Venereal; Sanitation; Immunization; Public Education }

Associations of Physicians and Coöperative Plans
Industrial Corporation Medical Departments
Municipal Hospitals and Clinics
Hospital Clinics
Privately Endowed Clinics
Free Public Hospitals
Educational Institutions (Medical School, Fresh Air Schools, Crippled Children Schools)
Tbc Institutions
Cancer and Heart Clinics
Army and Navy Hospitals (all mariners)
U. S. Veterans Bureau
Orthopedic Clinics
Pre-School Medical Activities
Pre-Natal Clinics
Railroad Hospitals and Medical Departments
Insurance and Liability Companies
Private Clinics (Mayo, Ford)
Pay Clinics

Each of these presents problems which must often be met by legislative activity on the part of the profession, after measuring these agencies with the previously mentioned fundamental principles.

Of all these agencies, the departments of health of the national government, state and city probably require the closest supervision, although these agencies do not create the legislative unrest which medical licensure periodically thrusts upon us. Here again the activities of a group must be judged by the ultimate effect upon the public, and the effect must be measured by principles of procedure.

If, as stated by President Vincent of the Rockefeller Foundation, "food, clothing, posture, sleep, occupation, personal adjustments are becoming concerns of public health," we are led to speculate on the ultimate functions which the state or society may undertake to exercise over individuals.

The primary functions of the state department of health being educational and preventive, as expressed by the Ohio Medical Association, the actual treatment of disease is not a function of public officials nor to be provided from public funds except in the

(a) Institutional care of the wards of the state; delinquent, diseased and defective;
(b) The treatment of the indigent;
(c) The treatment of those whose treatment is directly essential to prevention; and
(d) The inspection, recognition and recommending the correction of common defects of school children, as a primary feature in health education.

And that otherwise in the holding of public clinics under the auspices of public health officials they shall be so conducted that the purpose shall be purely educational and diagnostic.

Analysis of the foregoing develops the principle that official health administration is concerned not only with the prevention of disease and the education of the public but

that such public service is charged with the duty of protecting the public insofar as possible from incompetent and uneducated types of practitioners whose unscientific methods exploit sickness for commercial gain.

Dr. Ray Lyman Wilbur, former president of the American Medical Association, has properly emphasized the fact that the function of public health administration lies in educational efforts, the prevention and control of communicable diseases, the protection of water supplies, adequate sewage disposal, the abatement of nuisances deleterious to health, and information upon the trend of diseases.

As a governmental function, an individual has no right to expect government to be interested in, or assist in treating, a "stomach ache" or any personal affliction. But public health, in its growth, has become an immense, complex organization. In places it has become unwieldy. It has "poured over the sides" and inundated the field of medical practice. Public health is a part of scientific medicine. It is intimately related to preventive and educational medicine; it should never invade curative medicine. It has, however, in its enthusiasm sometimes gone into the treatment and curative branch of medicine. And from this field, it should be driven away.

Any examination of the records and proceedings of medical oragnizations will reveal the patient work done by the profession in promoting public health measures. This same policy should continue. But public health should and must realize the limitations of its activities. In a well-balanced democracy, government never does for the individual what the individual should do for himself. In consequence, public health should confine its activities to the preventive and educational fields.

However, many honest, farsighted citizens in touch with recent tendencies realize that in this country there is danger of too much paternalism, too much supervision of the individual, a danger of destroying or lessening personal responsibility and personal initiative, particularly in the field of "health."

May it be said to the credit of the medical profession, that it was probably the first representative group which raised its voice in warning against the fallacious proposal to provide professional service to the individual at public expense.

It should be emphasized that prevention and education are proper functions of the state, but the "practice" of medicine whether preventive or curative, is not a proper function of government.

Sometimes public health activities fail to emphasize the element of personal responsibility in public health matters; they sometimes tend to pauperize an element in the community well able to pay for medical service rendered to it, and to mislead the public into believing that the state should do for him what the individual should do for himself.

PROBLEM OF HOSPITALIZATION

Repeatedly we are hearing that to decrease the cost of hospitalization, and to provide the best hospital service in a community, there must be a well studied plan of construction, location, and type of hospital bed to suit the needs of individual communities. This is as essential as a financial program, or as the program of the public utilities to estimate future needs. To accomplish this, local legislation is required, and the sponsorship of civic organizations. In Detroit, there is a plan being worked out by the Public Health Committee, of the Detroit Board of Commerce, with the coöperation of Civic Improvement Associations.

The great importance of lay support in legislative work cannot be overestimated. The various agencies of a well organized Chamber of Commerce can be of great assistance, through governmental committees and public education departments. These departments are only too glad to provide information and support, which the profession could gain otherwise only at great expense, and the county societies are urged to foster this type of support.

The rapid spread of child health demonstrations and crippled children's commissions is creating many medical legislative problems. Here again the profession must weigh all activities by the basic principles already stated, and medicine must be better prepared to stop any deviation from these principles.

The trend toward paternalism creates constantly new legislative problems. The enactment of laws which create governmental aid to states, as illustrated by the Shepard-Towner Bill and its proposed successors, and by governmental aid as allowed in the Vet-

erans Bureau's ever expanding functions, should receive careful consideration by the profession and, where indicated, concerted opposition. The following remarks in this connection are presented for your consideration:

"STATE MEDICINE" AND "SOCIALIZED MEDICINE"

One of the most common difficulties in connection with policies toward state medicine and socialized medicine is the difference in understanding and application of these policies by individual members of the medical profession. As a matter of fact, there are numerous types of "state medicine" and a fewer number of types of "socialized medicine" that have become well established as governmental, social or medical principles and which are not in themselves objectionable; *provided they are applied and administered within the terms of the clearly expressed general policies of medical organization* set forth in the preceding pages.

The immense scope and wide variety of angles to the almost unlimited problem of state medicine and socialized medicine is illustrated in the estimate that there are over 1,000,000 persons employed on a whole time basis (in the United States alone) who are administering in one way or another to the care of the sick and the promotion of health. These estimates are made by Harry H. Moore, in his book, "American Medicine and the People's Health."

The agencies established, which are strictly state medicine, have created many legislative problems and will continue to do so. The wide variety of activities which can be classified as socialized medicine or unofficial medicine, such as altruistic and humanitarian efforts, may serve a definite social and economic need, especially if they are applied and administered within the terms of the fundamental policies which we are discussing. On the other hand, many of these are correct and practical in some features, and unsound socially and economically in others, while still other activities are unsound in general, both from the standpoint of sociology and economics. And these, as well as other types, when analyzed as separate problems, can be determined in their scope and intent, either good or bad, proper or improper, when fundamental policies are applied to them as a measurement test. These activities are causing an increasingly important problem and are resulting in widespread legislative activity.

Among the rapidly increasing number of activities that may be listed as "socialized medicine" and as coming within one or more of the three general groups just enumerated, are so-called health education by innumerable voluntary groups and agencies, either within their own membership or directed to the public at large and frequently including clinics, either temporary or permanent, and often made possible by assistance of governmental health departments, as well as enlisted service of physicians in private practice.

Hospitals, community fund collections and disbursements and public charities cover many "socialized medicine" activities, as do various types of clinics, free, pay and part-pay, including those on tuberculosis, prenatal, pediatric, preschool, venereal, tonsil, eye, hearing, dental, heart, orthopedic and cancer.

Another group of activities, which is being widely discussed, namely health insurance and contract practice, bids fair to result in legislative activity, at least in our own legislative bodies.

A health service based upon "quantity production" methods of modern industry, whether tests and advice by mail, community examiners, or group practice on a yearly stipend, is fallacious for the following reasons:

1. Destroys one of the fundamentals of modern medicine by eliminating the intimate relationship between physician and patient.
2. Would mean perfunctory medical service because physician would have little interest in patient.
3. Would destroy incentive for medical research.
4. Would exploit the medical profession, and menace public health.

In this relation, the pronouncement of the Speaker of the House of Delegates at the meeting of the American Medical Association in 1926 is to the point.

STATE MEDICINE AND CONTRACT PRACTICE

"This House of Delegates and the Judicial Council have defined and voiced opinions as to the Association's attitude toward so-called state medicine, contract practice and group

practice. There can be no confusion, doubt or questioning as to definition, inclusiveness or policies, for our Association has very clearly set forth its position. In like manner, expression has been voiced in regard to clinics of the free, charity and 'pay' classification. *Notwithstanding this action,* the resolutions adopted, and the Judicial Council's activities, *there are evidenced in many communities tendencies toward rapidly growing development of this type of medical practice. They are being aided, abetted and sponsored in many instances by medical men, members of constituent units and of our association, who, hiding under the guise of public health education, seek to justify their actions and ignore in doing so the Association's enunciated policies.* They defeat county and state societies' efforts toward regulation and direction of these forms of medical practice. Your Speaker does not purpose entering on a detailed discussion of the problems at this time, but he does desire to recommend that the House give consideration toward formulating some type of action that will consist of disciplinary measures whereby your former enactments will be observed and complied with by Fellows of the Association, who evidently consider themselves immune from your regulatory enactments. The query, hence, is propounded:

"Shall we not consider the recommendations and institution of procedure that will command compliance with the enactments of this Association?"

CODE OF ETHICS ON THIS SUBJECT

By implication, at least, the above pronouncement includes from the Principles of Ethics of the American Medical Association, Article 6, Section 2, as follows:

"Sec. 2.—*It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community.* To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession."

The Judicial Council of the American Medical Association has defined contract practice as follows:

"By the term 'contract' practice as applied to medicine, is meant the carrying out of an agreement between a physician or group of physicians as principals, or agents, and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita."

One often hears remarks by medical men that the profession should not take an interest in the action of state legislatures and city councils, but when it is recalled that in various states, of all bills presented for consideration, about 10 per cent are medical in nature, and that

In the last Michigan session of the 300 odd public acts enacted, over forty dealt with health measures. And also when we review the use to which are put funds, appropriated by our lawmakers, we find that nationally, 11.3 per cent of the expenditures go to health and welfare; in Michigan 19.7 per cent; in Wayne County, 53.77 per cent, and in the city of Detroit 19.9 per cent of the expenditures go for the same purpose, indicating that all physicians should be acutely interested in all legislation.

Thus having noted various activities which influence profoundly our relations with the public, it may be stated, in substance, that the problem of definition is important and that an application of relatively permanent fundamental principles is necessary.

At this time, it may be assumed, therefore, that any plan or system which affects the medical profession detrimentally will inevitably be detrimental to the public as well. Any plan, system or activity which tends to destroy or lessen scientific research, individual initiative and ambition, adequate remuneration for effort and ability, scientific independence, reasonable competition, personal responsibility; which would lower the standards of medical education or inculcate unsound ideas in the public mind toward scientific medicine—are wrong, unwise, impractical and will inevitably be doubly costly to the public.

I would call your attention to the constant spread of agitation to include occupational diseases under the Workman's Compensation Act. Such a bill will be presented in the present session of the legislature. Governor Brucker has been outspoken in his support of such a measure and if the possibilities of such legislation are considered, and to them

add the probability of allowing compensation and delegating medical care to the employer, in all cases in which existing disease is influenced or aggravated, it will be realized how large a percentage of the practice in an industrial community will be added to that of the previously mentioned 19 agencies, medical care being carried on under the direction of a lay commission. An effort to direct this type of legislation into proper channels is imperative. It might be mentioned that the present Workman's Compensation Board has expressed a lack of any desire to consult the profession, even on matters which are strictly medical in nature.

In speaking before county medical societies, the writer has noticed that the problem of denying admission to certain applicants to membership has proven embarrassing, and in certain cases has involved threatened recourse to the civil courts. State legislation establishing the status of this problem is inevitable.

In conclusion it can be said that the responsibility of the county society is to have a thorough understanding of the social trend of medicine outlined, the various agencies and their activities enumerated, and the fundamental principles understood. With this understanding it is possible to develop a plan of legislative activity which will direct and control the problems as they occur locally, and thus provide support for the important work of the state medical society.

NOTE: The writer has used freely the ideas of Dr. Leslie Bigelow, his teacher, and former president of the Ohio State Medical Society.

AN ANALYSIS OF TWENTY-FIVE CASES OF ECLAMPTIC PREGNANCIES

B. L. LIEBERMAN, B.S., M.D.†
DETROIT, MICHIGAN

The toxemias of pregnancy have always been a serious problem to the obstetrician, and to the man in general practice their grave import has produced a respect that is tinged with fear. Of recent years the literature upon the subject has assumed proportions so great as to make it difficult for the average physician to keep pace.

Through the coöperation of my chief, the late Dr. W. E. Welz, and members of the Providence Hospital Staff, a series of twenty-five cases of the eclamptic toxemias was studied as they occurred in private practice. Such observations were made as tended to bear upon the more recent findings in the literature.

Text-books state that the greatest number of cases occur amongst primiparæ, especially between the ages of twenty and thirty. These figures are well borne out in this small series as shown in Table 1.

TABLE 1

Case	Parity	Age
1	I	29
2	I	19
3	I	21
4	I	27
5	I	17
6	I	22
7	I	24
8	II	17
9	I	21
10	I	34
11	I	23
12	I	20
13	I	26
14	I	34
15	I	26
16	I	25
17	II	32
18	III	34
19	I	30
20	I	32
21	1	28
22	II	42
23	I	30
24	II	29
25	III	41

VISCOSITY OF THE BLOOD

It has been a long known clinical fact that in cases of eclampsia, when venesection or blood letting has been attempted, it has been necessary to use a needle of very large bore. This has been necessary because it has been invariably found that the blood is very thick and that it clots easily; in fact it may be so thick as to refuse to flow even

†B. L. Lieberman received the B.S. degree in 1925 from the College of the City of Detroit; M.D. degree from Detroit College of Medicine, 1926; interned at Providence Hospital 1925-1926; resident obstetrician Herman Kiefer Hospital 1926-1927; attending obstetrician Evangelical Deaconess Hospital.

through needles of extremely large bore, hence necessitating cutting down on the vein. Engelman was one of the first to attempt to measure the actual viscosity in cases of eclampsia. More recently Gruhzit studied half a dozen cases, reporting an increase in viscosity.

With a view to determining the exact relationship of this phenomenon, the Hess model viscometer was employed. The principle is mainly this: the viscosity of distilled water at room temperature is taken as the standard, this being considered as 1. The viscosity of the blood is then measured by the degree of displacement of a given column of distilled water. Readings are made directly on the instrument.

TABLE 2

VISCOSITY OF THE BLOOD

Case	Diagnosis	Viscosity
1	E	4.5
2	P E	3.8
3	E	3.9
4	N T	3.8
5	N T	4.0
6	E	4.3
7	E	4.2
8	N T	4.4
9	P E	4.4
10	P E	3.9
11	E	4.2
12	E	4.1
13	E	4.5
14	E	4.7
15	P E	4.3
16	P E	4.6
17	P E	3.4
18	N T	4.6
19	E	3.5
20	E	5.1
21	E	4.9
22	E	3.9
23	P E	3.9
24	N T	3.1
25	N T	3.2

In order to check the instrument and to establish a normal, fifteen cases of normal pregnancy taken at random gave an average reading of 3.4. Table 2 records the findings in the twenty-five toxic cases. For the sake of correlation with clinical findings, the cases are labeled E, P E, and N T in the table; denoting eclampsia, pre-eclampsia, and nephritic toxemia. It is significant that the cases recognized clinically under the heading of eclampsia are the ones with the high viscosity readings. These were the cases occurring as a rule in primiparæ apparently normal until about the seventh month, who suddenly without warning began to have marked elevation in blood pressure, albuminuria, headaches, and convulsions; and who after the termination of pregnancy returned to an apparently normal state.

Those cases having viscosity readings at or below normal were generally cases which gave histories of previous nephritic disturbances and who post-partum still showed elevated blood pressures and varying degrees of disturbed renal function.

This may offer an explanation, at least in part, for the increase in blood pressure and the therapeutic rationale of venesection in the true eclampsias. As a generalization one may conclude that in true eclampsia the blood viscosity is increased, whereas in nephritic toxemias the viscosity tends to remain normal or is lowered. The latter coincides with the findings of Austrian at Johns Hopkins, who studied the viscosity in some of the anemias and nephritides.

ISOAGGLUTINATION TOXEMIA

In 1905 Dienst stated that agglutinative changes occurring in eclampsia were the result of the invasion of the maternal organism by fetal cells showing that the maternal serum would agglutinate the cells of the fetus. McQuarrie and Gruhzit recently have attempted to confirm these views. The entire theory is based upon the principle of incompatible blood transfusion.

TABLE 3

BLOOD TYPES—JANSKY METHOD

Case	Mother	Baby	Father	Diagnosis
1	II	IV	IV	E
2	II	IV	?	P E
3	II	II	II	E
4	IV	III	?	N T
5	I	I	I	N T
6	II	IV	IV	E
7	IV	IV	II	E
8	II	IV	IV	N T
9	II	IV	IV	P E
10	IV	IV	IV	P E
11	II	IV	IV	E
12	III	IV	III	E
13	IV	IV	IV	E
14	II	IV	II	E
15	III	IV	II	P E
16	IV	IV	IV	P E
17	III	IV	IV	P E
18	IV	IV	IV	N T
19	IV	IV	IV	E
20	II	IV	IV	E
21	IV	IV	III	E
22	IV	IV	III	E
23	IV	IV	IV	P E
24	IV	IV	III	N T
25	IV	IV	IV	N T

Table 3 gives the results of the blood groups of mother, father, and child according to the Jansky method. In all doubtful cases the cells and sera were directly typed, otherwise stock sera of P. D. & Co. were used.

Gruzhit advances the theory that the increased viscosity found in true eclampsia is due to the incompatibility of the maternal and fetal elements of the blood. Reference to the table refutes this theory at once. There exists incompatibility in cases of nephritic toxemia as well as true eclampsia. Again there are cases of true eclampsia which show no incompatibility whatever, as witness cases 3, 13, and 19. We must look for some other explanation as to the cause of the increased viscosity.

BLOOD CHEMISTRY

Table 4 gives the blood chemistry findings obtained from the blood drawn at the time of convulsion or just previous to delivery. The only predominant diagnostic feature of the entire study is the marked elevation of the uric acid content in cases of true eclampsia.

URINALYSES

Specimens were obtained on entry to the hospital and previous to delivery. Postpartum specimens were obtained by catheterization on the tenth day after delivery. In the true eclamptics the urine practically always returned to normal; whereas in the nephritic toxemias the residual kidney changes were permanent. Careful questioning always elicited a previous history of renal disturbance in the nephritics.

Renal function P. S. P. Tests coincided with the results obtained by urinalysis.

TABLE 4

BLOOD CHEMISTRY

Case	Diagnosis	N P N	Uric Acid	Creatinine	Sugar
1	E	28.6	6.1	1.7	93.0
2	P E	25.5	4.2	1.3	130.0
3	E	26.7	2.5	1.56	87.9
4	N T	25.5	4.0	1.46	81.8
5	N T	38.9	2.1	1.56	90.0
6	E	35.2	3.26	1.26	92.0
7	E	25.21	4.3	1.42	100.0
8	N T	31.5	6.15	1.54	98.9
9	P E	29.1	3.81	1.33	97.2
10	P E	28.0	4.71	1.52	95.4
11	E	40.0	5.71	1.3	95.7
12	E	31.9	5.31	1.6	93.7
13	E	32.2	5.9	1.2	107.1
14	E	32.6	7.3	1.81	111.1
15	P E	25.6	3.4	1.2	94.3
16	P E	28.8	3.42	1.23	124.5
17	P E	27.2	5.9	1.81	90.2
18	N T	34.6	4.84	1.62	86.3
19	E	34.4	5.2	1.62	100.0
20	E	41.6	5.34	1.62	110.0
21	E	32.2	4.84	1.24	90.0
22	E	35.2	6.02	1.76	100.0
23	P E	31.2	5.41	1.02	95.0
24	N T	34.4	3.1	1.05	98.5
25	N T	30.7	3.9	1.26	101.5

CAPILLARY MICROSCOPY

Hinselman and his co-workers have advanced the theory that the underlying basic cause of eclampsia is a vasomotor disturbance creating an angiospasm. To corroborate this a study of the circulation of the capillaries was made. The finger nail bed, with the technic as first introduced by Lombard, was used. In those cases in which the viscosity was found elevated, the following capillary observations were made: hairpin shapes; bulging at the convexity; elongation of the loops; retardation of flow of blood; marked beading; arterial angiospasm; increased venous dilatation.

In those cases in which there was evidence of distinct renal pathology, the following were observed: numerous hairpin shapes; alternation of flow; reversal of flow; very marked tortuosity of loops; numerous branching forms.

TABLE 5

OPHTHALMOSCOPY

Case	Findings
1	Normal fundus
2	Normal fundus
3	Nasal papilledema. Slight venous congestion
4	Venous tortuosity and engorgement. Moderate papilledema.
5	Vessel engorgement slight. Increased retinal redness
6	Normal fundus
7	Slight papilledema
8	Choked discs. Venous engorgement and tortuosity
9	Normal fundus
10	Venous tortuosity and engorgement slight
11	Normal fundus
12	Normal fundus
13	Normal fundus
14	Slight venous engorgement
15	Normal fundus
16	Normal fundus
17	Nasal papilledema
18	Chronic albuminuric retinitis
19	Slight receding papilledema
20	Not examined. Patient died
21	Slight papilledema
22	Normal fundus
23	Receding papilledema
24	Normal fundus
25	Normal fundus

OPHTHALMOSCOPY

The findings in the retina are given in Table 5. With the exception of those cases in which there was advanced change, no definite diagnostic phenomena were present.

BIRTHS

Of the twenty-five children that were born there were sixteen alive and nine stillbirths with a fetal mortality of thirty-six per cent. This appears to be very high but when it is considered that the majority of the babies were premature, and that they in turn were affected by the toxemia of the mother, then it will be seen that the results are comparatively good. Table 6 confirms this.

TABLE 6

BIRTHS

Case	Sex	Condition	Age Weeks	Length Cm.
1	M	Alive	38	48
2	M	Alive	40	50
3	M	Alive	38	46
4	F	Alive	40	48
5	F	Stillborn	30	35
6	F	Stillborn	32	40
7	M	Alive	36	44
8	F	Alive	36	45
9	M	Alive	36	44
10	M	Alive	36	49
11	F	Alive	32	40
12	M	Stillborn	34	43
13	F	Alive	40	53
14	F	Stillborn	32	40
15	F	Alive	40	52
16	M	Alive	36	43
17	F	Alive	40	52
18	M	Stillborn	32	40
19	F	Alive	40	45
20	F	Stillborn	40	48
21	M	Stillborn	24	31
22	F	Stillborn	40	53
23	F	Alive	40	46
24	M	Stillborn	30	35
25	F	Alive	40	50

MECHANISM OF LABOR

The conservative method of treatment was followed throughout with one maternal death. This case entered the hospital in a moribund condition. Table 7 shows the procedures followed in delivery. In general, venesection, morphine in heavy dosage, limitation of fluids, reduction of protein and forced elimination were the measures instituted.

SUMMARY

1. Convulsive pregnancies tend to occur mostly in primiparæ between the ages of twenty and thirty years.

2. The viscosity of the blood appears elevated in true eclamptics as differentiated from nephritics.

3. Isoagglutination toxemia is not an etiologic factor in the causation of the eclampsias.

4. Urinalyses offer valuable aid as to diagnoses; whereas renal function tests help determine prognoses.

5. Blood chemistry studies are of no definite value in themselves. The only constant finding is an elevation of the uric acid in eclampsia.

6. Capillary microscopy lends support to the angiospastic theory of eclampsia.

7. Ophthalmoscopy is only a supplementary aid in diagnosis.

8. Convulsive pregnancies are attended with a high fetal mortality due to prematurity and toxicity.

9. Conservative treatment gives the best maternal results.

TABLE 7

MECHANISM OF LABOR

Case	Presentation	Delivery
1	R O A	Labor induced. Mid forceps
2	R O A	Normal delivery
3	R O A	Mid forceps
4	R O A	Normal delivery
5	R O A	Normal delivery
6	L O A	Normal delivery
7	S L A	Breech extraction
8	R O A	Normal delivery
9	L O A	Normal delivery
10	R O A	Labor induced. Normal delivery
11	L O A	Low forceps
12	R O A	Normal delivery
13	L O A	Low forceps
14	L O A	Normal delivery
15	R O A	Normal delivery
16	L O A	Low forceps
17	L O A	Normal delivery
18	L O A	Normal delivery
19	R O A	Mid forceps
20	R O A	Manual dil. Version-Ext.
21	S R A	Footling. Breech Ext.
22	L O A	High forceps
23	R O P	Low forceps
24	R O A	Normal delivery
25	L O A	Normal delivery

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PSYCHIATRY IN PEDIATRICS

LEO HENRY BARTEMEIER, M.D.
DETROIT

Discussions regarding the practical application of Child Guidance have not resulted in any very definite solution for pediatricians in private practice. Whether or not such physicians shall assume the responsibility of advising parents about the training of their children apparently remains a mooted question. Among pediatricians, there is one particular group, represented by Dr. Bronson Crothers, who maintain that the pediatricians themselves should administer mental hygiene. They contend that it is less complicated than it seems and that it is the duty of child specialists to carry out this project. It is quite generally conceded among American psychiatrists, on the other hand, that Child Guidance Clinics, with their organizations of psychiatrists, pediatricians, psychologists and psychiatric social workers, constitute a sensible method of directing child health. In the field of education, we have witnessed an extensive and enthusiastic movement among clinical psychologists to meet the issue of mental hygiene through the contacts which the child and his parents make with the school. Finally, there are those who identify mental with spiritual health and believe that the Church is best fitted to advise in these matters.

No aspect of child behavior can be properly interpreted or corrected without a knowledge of the child as a whole and an understanding of the environment in which he lives. A school failure, persistent enuresis, or a troublesome stealing problem, are symptoms of a disorder which involves the total child and it is our belief that this broader conception of the word "health" necessitates important changes in pediatric practice. Methods employed today however, continue to devote attention only to the child's physical status and thereby remain fractional and incomplete. They fail to study the child as an individual and take no cognizance of the principles and objectives of mental hygiene now universally accepted and in existence more than two decades. Believing that the establishment of a closer relationship between psychiatry and pediatrics would meet the present day needs of those devoting themselves to child care, it was determined to experiment with such a procedure over a period of six months. This decision was further prompted by our efforts during the past three years to facilitate a better arrangement whereby the pediatricians' patients might be studied from the mental hygiene standpoint. Psychiatric consultations from the pediatricians had not always evolved as successfully as we would wish. The referring physician sometimes found it difficult to persuade a mother to bring her child to us for examination because she frequently did not understand the complexity or the seriousness of the problem. The psychiatrist, on the other hand, not infrequently experienced certain obstacles in establishing proper rapport and became convinced that mothers have a psychological relationship with the pediatricians, of which apparently neither they nor the physicians are always aware. We were increasingly impressed of the need for adopting a plan not heretofore practiced among medical men.

After consulting with a group of pediatricians, it was decided that instead of the mother bringing the child to the psychiatrist in his office, she was to visit the psychiatrist in the office of the pediatrician. A particular day was set aside each week and four hours were given over to the study of those children whom the pediatricians might wish to refer. The notion of a visiting or part-time psychiatrist was not a new suggestion. Child Caring Departments of many social agencies throughout the land have employed such methods to good advantage for at least the past five years.

Whenever the need for psychiatric examination and advice occurred, the pediatrician discussed the value of such procedure with the mother and suggested that at the time of her next visit to his office, this part of his service to the child would be rendered by one of his colleagues. In no case did parents make objections to such procedure. When the mother and child arrived for the appointment, the mother was interviewed by the psychiatric social worker, who obtained

the necessary social history, and simultaneously the child was studied by the psychiatrist; upon the completion of these two steps, the worker and psychiatrist conferred and the mother was then given some understanding of the problem and such advice as seemed most important was formulated. If necessary, a subsequent appointment was arranged and further study could be thus accomplished by combining it with additional advice to the parent. Notes were dictated in the record, and from now on the pediatrician found an opportunity to follow the treatment hand in hand with the psychiatrist, and he was thereby able to acquire actual experience in a clinical demonstration of mental hygiene work.

In those cases which the child specialist had been following over a fairly long period and there arose a need for psychiatric assistance, it was found advantageous to give whatever advice possible during the first psychiatric interview. The study was thereby abbreviated and only the more important aspects of the problem were attacked; the others could always be discussed at subsequent visits.

This six months' experiment was productive of certain conclusions which heretofore had not been so clearly appreciated. Among these, the following were the most important:

It soon became apparent to us that there had been set up between the pediatrician and the mother of the child the same relationship which exists between the psychiatrist and his patient, and that not until the psychiatrist had become identified with the pediatrician was it possible to secure a rapport of a satisfactory type. That she regarded the psychiatrist as the pediatrician was borne out by the fact that in the course of the psychiatric interview she frequently asked for advice about physical problems as well and often misnamed the psychiatrist, addressing him by the surname of the pediatrician. If the case was of such a nature that the pediatrician would desire to transfer it for subsequent psychiatric care, we now experienced no difficulty in having the mother bring the child to us in our own offices.

When a child is ill, his mother looks to the pediatrician for help. The relationship between the mother and the physician seems a purely social one; he prescribes no medicines nor treatments for her and never makes any examinations. There is not the ordinary doctor-patient relationship. The mother's association with the pediatrician is one in which faith and confidence largely dominate; she believes him, trusts him and hopes in him; she is uneasy until he arrives; once he is there, her personality reactions undergo a change; all becomes calm; her symptoms of apprehension, dread and fear, disappear; she feels the influence of his protection. He, in turn, frequently relies upon *her* ability to follow his advice—to phone him if a change for the worse occurs—to assist him in the restitution of the child who is sick, and, once she has done these things, he has acquired a certain faith and feeling of confidence in her. These are some of the reasons why he finds it difficult to send her to another physician, whose office is usually removed from his own and whose type of work is unfamiliar to her. These are also some of the causes which make it so arduous for the psychiatrist to succeed with her. As soon, however, as she faces the psychiatrist as the pediatrician's helper, no longer do these obstacles exist.

We have frequently said that to treat the child we must treat his mother, but the significance of this statement is seldom appreciated by most of us. Whenever summoned to care for a child, the pediatrician is in reality being called upon to render service to two patients; the smaller is mainly physically ill; the other, more mentally disturbed. Whatever he accomplishes for the child incidentally constitutes the best possible instrument with which he can persuade the mother to follow his advice in matters of mental hygiene. He has become a person of authority and is in a peculiarly fortunate position to succeed in matters of Child Guidance.

It is my conviction that all those problems which arise in the course of establishing primary habit reactions, such as the feeding, toilet, sleep and play habits, are often amenable to correction by the pediatrician and need not be referred for special psychiatric advice. I would also commend for your consideration the inclusion of a relatively few simple questions regarding these matters to be routinely asked in the course of the taking of the medical history. Your inquiring as to whether certain vegetables are refused, your questioning the parents about

the child's behavior in connection with his going to bed, lend such topics an importance which they would otherwise not ordinarily command. Pediatricians will render great service to Child Guidance through such humble efforts. You are known as Child Specialists to the mothers of your patients. They often expect your advice in these matters. If you find it necessary to refer them to a psychiatrist when they inquire of you regarding these difficulties which seem small to them, they frequently do not accept the suggestion whole-heartedly; somehow, their confidence is lessened; you weaken the bonds of that psychological relationship we have attempted to describe.

If you are believers in Child Guidance, then, as good mental hygienists, it is necessary that you set certain examples.

We will first consider your own attitude toward the child. It is a well known fact that the mother's powers of observation are considerably enhanced in her state of apprehensiveness over the illness of her child. Your behavior during the examination of a sick youngster is usually observed most minutely by the mother. The least impatience, the slightest irritability, or any lack of gentleness and humaneness, is instantly detected. Perhaps the greatest criticism mothers make is the feeling that you are in a hurry. You are anxious to obtain an accurate understanding of the child's physical condition, but if in so doing you disrupt any of the components of the psychological relationship with the mother, you automatically interfere with what you can subsequently accomplish for the child, and it is obvious that the child's chances of recovery often hinge so definitely upon how well you succeed with the mother. Your confidence in your own judgment is manifested in your giving a diagnosis without hesitation, or by saying frankly that you do not know and that it will be necessary to observe the child further.

Whenever called upon to treat a child in an acute illness, it might well be included, as a portion of your therapeutic program, to caution the mother to avoid excessively indulging the patient. While curing the physical disorder, it is important not to thereby encourage the development of a behavior problem. Less emotional and more intelligent nursing will frequently diminish tendencies to develop the spoiled-child type of reaction. An attack of mumps should not be the justification for supplying the child with an assortment of new toys, nor for pampering and constant unnecessary attention. When informed that her child suffers from her over-indulgence, so many a mother is quick to offer the argument that "he has been sick so much." While I am not in favor of an utter lack of solicitude and attention during acute illnesses, I know, on the other hand, that a greater amount of these is necessary than during periods of good health. What I plead for is less affection and less spoiling. Not a few of the enigmatic complaints of sick youngsters represent drives for more and more attention. Illness should be made as painless and bearable as possible, but never a pleasurable episode. We, as physicians, are too often inclined to abet the spoiling of the child by our efforts to comfort the mother in yielding to her various requests which prolong convalescence unnecessarily and not infrequently establish such patterns of behavior that subsequent illnesses in adult life occur more easily Placing a premium on the illnesses of childhood tends to develop invalidism in adult life. When you hear or see mothers bribing, coaxing or threatening the child prior to or in the course of your examinations in the office or in the home, just a word of explanation of the harmfulness of such behavior will, in time, constitute valuable steps in Child Guidance.

We have discussed briefly your own attitude toward the mother and the child. The pediatrician's nurse, in her contacts with his patients, is also in a position to render mental hygiene some good assistance. We suggest that she give less service to many of the youngsters who are three years or older. It is true that a little more time will be required, but if she will encourage the child to remove his own clothing, the child will obtain considerable satisfaction in demonstrating his manual ability, and if he is successful the mother also will be included in feelings of pride. If, on the contrary, he is unable to perform such a task, an example has been set by the nurse of what should be expected of the child and the mother will often be stimulated to begin such training soon thereafter. We consider it also a good plan to permit the child to climb onto the examining table by means of conveniently arranged steps, in order to

demonstrate to the mother how she should develop confidence in her youngsters. These are the small and tiny points in professional behavior which are sometimes known to the profession as technic, but I contend that they are all-important if we are to succeed in Child Guidance.

Within our six months' experimental period, none of the twenty-eight children referred for consultation were more than ten years of age, and almost one-half of the group were pre-school children. The value of this experiment can be appreciated from the fact that twenty-seven of these children continue to remain under active supervision. For practical purposes, they may be said to fall into four general sets:

1. Organic disease of the central nervous system. These included a five-year old boy with generalized sarcomatosis of the central nervous system. In this group also was an eight-year old girl, whose encephalitis presented a most difficult diagnostic problem because of its similarity to brain tumor. We have not yet been able to arrive at definite conclusions regarding a ten-year-old boy whose periods of somnolence remain unexplained.

2. Feeblemindedness, which included not only two cases of rather severe mental defect and the need for their proper placement, but two other interesting youngsters whose high degree of mental deficiency makes it necessary that we arrange with the school authorities for a special type of education.

3. We have encountered certain children whom we have seen fit to call borderline cases; these remain under our observation and we have not yet been able to determine whether their symptoms are organic or psychogenic in origin.

4. The largest number fall into this group, which comprises such problems as bad feeding habits, enuresis difficulties, children who bite their nails, spoiled child reactions, stammering youngsters and those who have developed lying and stealing tendencies.

In conclusion it may be stated that the above four general groups represent quite fully the deviations wherein the assistance of a psychiatrist appears decidedly warranted and desirable. Nevertheless, I am of the opinion that if we are to obtain a maximum degree of success in our management of so-called behavior problems the same can only come about through mutual coöperation and the utilization of the previously mentioned psychological relationship existing between mother and child.

DISCUSSION

DR. CAMPBELL HARVEY (Pontiac): I am very much in sympathy with the Mental Hygiene in Childhood Movement. The pediatrician must do a great deal of this work himself, and I know it constitutes about sixty per cent of my work. I think that the best laboratory for the work in mental hygiene and child guidance is the child in his environment.

To illustrate: A child was brought to me for circumcision. As this had already been well done, I asked why the child needed such an operation. "Well, he is nervous, and the school nurse said he needed to be circumcised," the parents said. "Did the nurse examine him?" I asked. "No," they said, "but he is so easily excitable and fidgety that she thought it would cure him." Further questioning brought out the fact that the school teacher was slapping children's faces in school. The discharge of the teacher brought relief. To think that such things are going on in a standard school today is preposterous! The child is a unit. He must be considered from the mental, physical, hereditary and environmental standpoints, oftentimes by the pediatrician.

Frequently, a careful history will reveal a cause for nervousness or departure from normal mental behavior. If we as pediatricians will not help the child, the parents sometimes will not take him elsewhere. This is due to the general antipathy of the public to mental disease, or what they think is mental disease, and the common fallacy that "he will outgrow it." There is still a further factor entering into it. Unlike a physical ailment, which many a fond parent wishes on his child, a mental difficulty or environmental maladjustment is looked upon as either unimportant, is repressed because the thought is unpleasant, or the person mentioning the abnormal behavior as requiring special attention is considered to be too critical. I have in mind an eight-year-old boy who is, in my opinion, bordering on idiocy. I have watched him from childhood, being called in occasionally in consultation for pysical ills. He has been examined by Merrill-Palmer School, who has told the mother that the child is mentally backward, also by a half-trained psychologist who tells the mother that "the child is a victim of his fears" and by a neurologist who fails to recognize the mental deficiency. The family physician feels as I do about the case, but we have both felt that a psychiatrist should be consulted. The mother, of course, feels that the child is simply a victim of his fears, although she admits to me he has no real fears because she has carefully guarded him, and will not believe the truth. Sometimes we, as pediatricians, can help the mother understand these cases.

There is another kind of case, however, which we neither have the time nor the ability to handle. Such a case is an antipathy between mother and son. The case required careful study of both mother and son by a capable psychiatrist, and for a period of a year of study no absolute diagnosis has been made.

I think that Dr. Bartemeier's method of examining the child in the pediatrician's office will solve a great deal of the difficulty.

FAMOUS MEN IN MEDICAL HISTORY

BENJAMIN FRANKLIN AND THE FOUNDING OF THE PENNSYLVANIA HOSPITAL*

RUSSEL L. MALCOLM

Benjamin Franklin, in his childhood environment, could have hoped for nothing more than a life of hard and steady labor, yet it was his persevering pursuit of that very labor which made him the representative of his people on many foreign missions. In this paper, only a very inadequate summary will be made of Franklin's interests outside of the field of medicine. In fact, it is not my purpose to attempt to cover even his medical work, but rather to show, if possible, that Franklin, though not primarily a physician, rightfully deserves an important position in the history of American medicine, a fact which, I believe, is not generally known.

Benjamin Franklin, the tenth son of Josiah Franklin, was born the seventeenth of January, 1706, across from Old South Church in Boston. Entering school at the age of eight, he remained for only two years, being forced to stop because of financial difficulties. For the next few years he assisted his father in the business of a tallow chandler and soap boiler. In his thirteenth year, he was apprenticed to his half brother James, printer of the New England Courant. The young apprentice, under an assumed name, wrote many articles, which were so very favorably accepted by the readers that James became jealous of his brother's success. Relations became so strained that at the age of seventeen the younger brother ran away to Philadelphia, where he was destined to make his home until his death, April 17, 1790.

In 1724, following the advice and believing the promises of Governor Keith, Franklin went to London to get equipment to start in business for himself. Upon arriving he found he had been tricked, and the governor had made none of the preparations promised. Consequently the young printer was forced to find work there. Here he remained until 1726, when he returned to Philadelphia to establish his own shop. This marked the beginning of Franklin's influential writing, which rapidly brought him before the public's eye, and thus paved the way for his varied and famous career.

Volumes have been written on the public and private life of Benjamin Franklin, so suffice it for me to say here that he represented his province in the General Assembly; his country in London and Paris; was one of the signers of the Declaration of Independence; and one of the most active of those who attempted to bring about harmony between England and the American colonies.

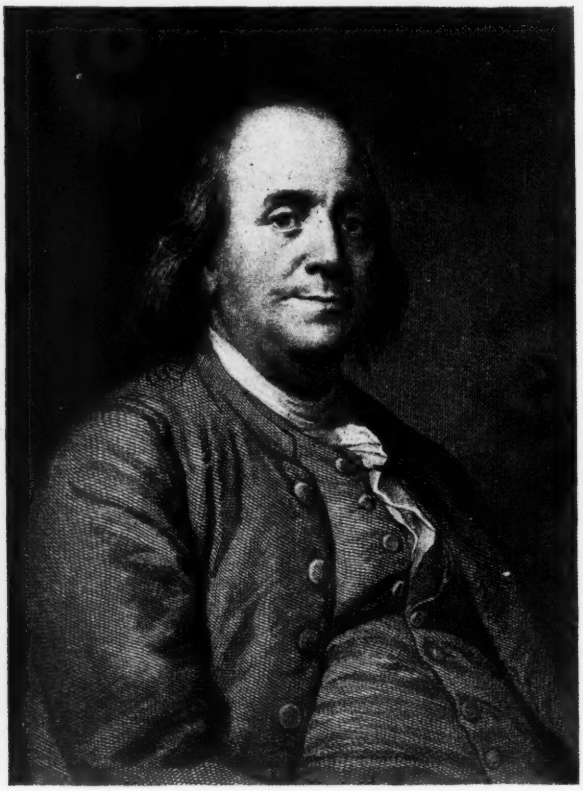
In dealing with the phases of Franklin's life, in which we are primarily interested in this paper, I shall discuss, first, his connections with the American Philosophical Society; second, his part in the founding of the Pennsylvania Hospital; and third, his writings on disease.

Franklin, in his autobiography, says: "In the year 1728, when I was but twenty-two years of age, I united the majority of well informed persons of my acquaintance into a club which was called the Junto, the object of which was to improve our understandings. We met every Friday evening." The American Philosophical Society is the direct lineal successor of that Junto, and still maintains the Friday evening meetings. As the population grew larger, and the colonies became more densely settled, Franklin saw the need of a society of larger scope and usefulness than the Junto, so in 1743 he issued his circular entitled, "A Proposal for Promoting Useful Knowledge among the British Plantations in America." In this he urged that "one society should be formed of virtuous or ingenious men residing in the several colonies, to be called The American Philosophical Society, the members of which are to maintain a constant correspondence." And that "Philadelphia, being the city nearest the center of the continent colonies, communicating with all of them northward and southward by post, and with all of the islands by sea, and having the ad-

*Delivered before the Victor C. Vaughan Society of the University of Michigan Medical School, November, 1930.

vantage of a good growing library, be the center of the society."

The proposition was favorably received, and Dr. Franklin, when in New York in the spring of the following year, wrote to Gov-



BENJAMIN FRANKLIN

ernor Colden of that province as follows: "I can now acquaint you that the society, as far as relates to Philadelphia, is actually formed and has had several meetings to mutual satisfaction. . . . The members are: Dr. Thomas Bond as physician, Mr. John Bartram as botanist, Mr. Thomas Godfrey as mathematician, and many other prominent men." Thus was started the first scientific society in the new world. It led a struggling life, and it is believed by several authorities that in the late fifties the society passed into a condition of "suspended animation" only to revive at a later period with more vigor than ever.

For the original Junto Franklin still retained the warmest affection, as evidenced by his letter to Hugh Roberts, written from England in 1765: "I wish you would continue to meet the Junto, notwithstanding that some effects of our public political misunderstandings may sometimes appear there. 'Tis now perhaps one of the oldest clubs, and, as I think, it was formerly one of the best in the King's dominion. It wants but about two years of forty since it was established."

The political dissensions between the Proprietory party, led by James Hamilton, the president of the Philosophical Society, and the Popular party, led by Franklin, resulted in the concentration of the friends of the former in the American Philosophical Society. This in turn inspired Franklin's friends to reorganize the Junto under the name, "The American Society Held at Philadelphia for Promoting Useful Knowledge." It elected Dr. Franklin president, and added to its membership many men of note from other provinces. Many members, by 1768, of one society, also belonged to the other so that it was inevitable that a union of the two societies must come. The conjoined society was formed in the following year under the name, "The American Philosophical Society Held at Philadelphia for the Promotion of Useful Knowledge." Franklin was elected president over his political opponent, James Hamilton, an office which he held by successive re-elections until his death in 1790.

The transactions of the society have been published, and in them we find that one of the more prominently discussed subjects was Medicine. In these discussions Franklin took an active part with such men as Rush, Morgan, and Bond.

The early transactions of the society reveal that the medical subjects which Franklin discussed included the common cold, fresh air in the treatment and prevention of disease, gout, and stone in the bladder. These will be reviewed later in the paper.

Secondly, we shall discuss Franklin's part in the founding of the Pennsylvania hospital. It is from Franklin that we find the evidence that this is the oldest hospital in Pennsylvania. It was not founded until 1751, and for this reason the statement is sometimes made that the present Philadelphia hospital antedates it. This assertion, however, is not based on a correct understanding of the facts. As a city poorhouse or almshouse, the municipal institution is entitled to claim priority of foundation, but not as a hospital in the generally accepted sense of the term.

Benjamin Franklin in his account of the Pennsylvania hospital states the following

to show there was no provision for the sick and injured in Philadelphia: "About the end of the year 1750, some persons, who had frequent opportunities of observing the distress of such distempered poor as from time to time came to Philadelphia for the advice and assistance of the physicians and surgeons of that city, saw how difficult it was for them to secure suitable lodgings, and other conveniences proper for their respective cases, and how expensive the providing of good and careful nurses, and other attendants, for want thereof, many must suffer greatly, and some probably perish, that otherwise might have been restored to health and comfort, and become useful to themselves, their families, and the public, for many years after, and considering, moreover, that even the poor inhabitants of this city, though they had homes, yet were therein but badly accommodated in sickness, and could not be so well and easily taken care of in their separate habitations, as they might be in one convenient house, under one inspection and in the hands of skillful practitioners; and several inhabitants of the province, who unhappily became disordered in their senses, wandered about to the terror of their neighbors, there being no place except the house of correction or almshouse in which they might be confined and subjected to proper treatment for their recovery, and that the house was by no means fitted for such purposes; did charitably consult together and confer with their friends and acquaintances on the best means of relieving the distressed under those circumstances. . . . "

Further evidence of the lack of any hospital provision for the sick and insane is advanced in Franklin's petition to the House of Representatives of the province for a charter for the hospital, which states: "Your petitioners beg leave further to represent, that, tho' the good laws of this province have made many compassionate and charitable provisions for the relief of the poor, yet something further seems wanting in favor of such whose poverty is made more miserable by the additional weight of a grievous disease, from which they might easily be relieved, if they were not situated at too great a distance from regular advice and assistance; whereby many anguish out their lives, tortur'd perhaps with the stone, devour'd by the cancer, deprived of sight by cataracts, or gradually decaying by loathsome distempers; who if the expense of the present manner of nursing and attending them separately when they come to town were not so discouraging might again, by the judicious assistance of physic and surgery, be enabled to taste the blessings of health, and be made in a few weeks useful members of the community, and able to provide for themselves and families."

In his autobiography Franklin tells how his friend, Dr. Thomas Bond, conceived the idea of establishing a hospital in the city of Philadelphia and started out to obtain subscriptions for it. His efforts met with very little success, and after a time he came to Franklin telling him that many of those whom he asked for money would inquire if he had consulted Franklin, and what the latter thought of the matter. When Bond told them he had not because he considered it was out of the statesman's line, they had put him off with the reply that they would consider the proposition. Franklin, being always willing to aid in such projects for the public, engaged heartily in the support of the affair. He endeavored first, according to his custom, to prepare the minds of the people by writing on the subject in the newspapers. Subscriptions began to come in more generously, but he soon saw it would be necessary to secure aid from the assembly, which he petitioned. The country members were opposed because they thought it would serve only the inhabitants of Philadelphia, and that therefore the citizens of the city should bear the expense. They claimed that Franklin's statement that two thousand pounds had been raised by subscription was preposterous. Therefore, Franklin drew up another petition by which it was enacted that whenever the hospital should be organized and its managers have secured two thousand pounds by voluntary subscription, the assembly should grant an equal sum towards the project. This condition carried the bill. Franklin concludes his account of the affair by this statement: "I do not remember any of my political manoeuvres, the success of which at the time gave me more pleasure; or wherein, after thinking of it, I more easily excused myself for having made use of some cunning."

The managers had no trouble in raising more than two thousand pounds by subscrip-

tion, but a further objection raised against the petition was that the expense of paying physicians and surgeons would use up the money. Consequently Drs. Lloyd Zachary, Thomas Bond, and Phineas Bond offered their services to the hospital without pay. The charter was formally granted on May 11, 1751.

The board of managers was appointed and Joshua Crosby elected the first president and Benjamin Franklin its first clerk. Many of the early minutes of their meetings are in Franklin's handwriting. An advertisement in the Pennsylvania Gazette of February 6, 1752, stated the hospital was prepared to receive patients.

The three doctors named above were to be assisted in consultation and in unusual cases by Drs. Greene, Cadwalader, Moore, and Redman. Benjamin and Thomas Bond were appointed as a committee to procure a seal for the hospital. The design accepted by the board is still in use, but the original, made of silver, was destroyed in 1833, when it became worn out, and was replaced by one made of steel.

In 1754 the managers desired to secure a permanent site for the hospital. Accordingly they purchased a lot for five hundred pounds from the money they had collected. By March, 1755, suitable plans were submitted, and on May 28 the board of managers laid the cornerstone, which bore this inscription composed by Franklin:

IN THE YEAR OF CHRIST
MDCCLV
GEORGE THE SECOND HAPPILY REIGNING
(FOR HE SOUGHT THE HAPPINESS OF HIS PEOPLE)
PHILADELPHIA FLOURISHING
(FOR ITS INHABITANTS WERE PUBLICK SPIRITED)
THIS BUILDING
BY THE BOUNTY OF THE GOVERNMENT,
AND OF MANY PRIVATE PERSONS,
WAS PIOUSLY FOUNDED
FOR THE RELIEF OF THE SICK AND MISERABLE
MAY THE GOD OF MERCIES
BLESS THE UNDERTAKING

In this same year Joshua Crosby died, and Franklin was elected president of the board of managers, in which capacity he officiated at the first meeting of the board in the new hospital. He continued his work of securing public subscriptions and all religious sects, speakers, and tradesmen donated liberally or preached publicly, and gave the proceeds to the hospital.

From the early records of the hospital are taken these two rather interesting admission notes:

October 13, 1755, "Michael Higgins, a soldier, was admitted, having his under jaw shot off in the late engagement under General Braddock."

June 4, 1753, "Sister Elizabeth, please to receive bearer into the hospital and entertain him there till the physicians have considered his case.

Your Friend and Serv.,
B. Franklin."

During the War of the Revolution the hospital traveled a rough road financially, and was saved only by these various subsidies. In 1767 the hospital became connected with the medical school of the University of Pennsylvania, and its further development in this relation has been brought out in the paper on Dr. John Morgan.

Thirdly, we shall discuss what is probably of greatest interest in our field, namely Franklin's writings on disease. The study of medicine was one of his chief interests, and is probably one of the least known. He borrowed and read many medical books, and discussed the treatment of various diseases. To quote William Pepper: "Benjamin Franklin lived in an age when men of education and genius in varying paths of life did not consider it strange or peculiar to think, discuss or write about medical matters. These men did not feel they were treading on any ground sacred to the physician in so doing." But to Franklin, more important than his readings was the keenness with which he observed diseases. He was not a graduate of any medical school, but he was elected a member of several medical societies. Even though he did not practice medicine as a profession, and receive payment for his medical advice, he nevertheless did treat a number of people for various ills.

The words of Franklin are far superior to any I might use, so in discussing his writings I shall quote freely from his letters in which he speaks of medical matters.

Among the many medical subjects that Dr. Franklin discussed with his friends might be mentioned, "Diet and Its Effects on Health and Disease." In one letter he wrote, "In general, mankind, since the improvement of cooking, eats about twice as much as nature requires. Suppers are not bad, if we have not dined, but restless nights naturally follow hearty suppers after full dinners. Indeed, as there is a difference in constitutions, some rest well after these meals, it costs them only a frightful dream and an apoplexy, after which they sleep until doomsday. Nothing is more common in the newspapers than instances of people,

who after eating a hearty supper, are found dead abed in the morning."

We learn from his autobiography that at the age of sixteen he became a vegetarian. He was strongly opposed to the eating habits of most of the people and believed that a vegetable diet was one to be chosen to preserve health. However, there was probably another reason for his change of diet, namely, that by giving up meat he was able to save enough money to buy the books he desired.

Franklin was keenly interested in the subject of smallpox inoculation and in strong contrast to the views of his Boston relatives on this matter he states, "In 1736 I lost one of my sons, a fine boy of four years, by the smallpox taken in the common way. I long regretted and still regret that I had not given it to him by inoculation. This I mention for the sake of parents who omit that operation, on the supposition that they should never forgive themselves if a child died under it." Franklin had his daughter Sally inoculated in 1746. That he was a great advocate of the practice is further evidenced by his many references to it in his letters. In 1759 he prevailed upon Dr. William Heberden to write an account of the success of inoculation as a means of protection against the disease. The pamphlet was entitled, "Some Account of the Success of Inoculation for the Smallpox in England and America together with Plain Instructions, by Which Any Person May Be Enabled to Perform the Operation, and Conduct the Patient Through the Distemper."

Franklin's invention of bifocal lenses entitles him to a high rank among ophthalmologists. There is a description of these lenses in a letter to George Whatley, where he says, " . . . By Mr. Dollands' saying, that my double spectacles can only serve particular eyes, I doubt he has not been rightly informed of their construction. I imagine that it will be found pretty generally true that the same convexity of glass through which a man sees clearest and best at the distance proper for reading, is not the best for greater distances. I therefore had formerly two pair of spectacles, which I shifted occasionally as in traveling I sometimes read and often wanted to regard the prospects. Finding this change troublesome and not always sufficiently ready, I had the glasses cut, and half of each kind associated in the same article. By this means, as I wear my spectacles constantly I have only to move my eyes up and down to see distinctly far or near, the proper glasses being always ready."

Franklin was also an aid to the genito-urinary surgeon by his invention of a flexible catheter. This is recorded in a letter to his brother John: "Reflecting yesterday on your desire to have a flexible catheter, a thought struck into my mind, how one probably might be made, and lest you should not readily conceive it by any description of mine, I went immediately to the silver-smith's and gave directions for making one. But now that it is done I have apprehensions that it may be too large to be easy; if so, a silver-smith can easily make it less by twisting or turning it on a small wire, and putting a smaller pipe to the end, if the pipe is really necessary. This machine may be either covered with small fine gut, first cleansed and soaked a night in a solution of alum and salt water, then rub dry, which will preserve it longer from putrefaction, then wet it again, and draw it on and fasten it to the pipes at each end, where little hollows are made for the thread to bind in, then the surface is greased. Or perhaps it may be used without the gut, having only a light tallow rubbed over it to smooth it and fill the joints. I think it as flexible as would be expected in a thing of the kind, and I imagine will readily comply with the turns of the passage, yet has stiffness enough to be protruded. If not, the enclosed wire may be gradually withdrawn. The tube is of such a nature, that when you occasion to withdraw it, its diameter will lessen whereby it will move more easily. It is a kind of screw and may be both withdrawn and introduced by turning . . ."

Franklin's letters on lead poisoning have really become classics in medical literature. Dr. John Hunter founded his essay on dry belly-ache upon Franklin's letters, giving the credit freely due him for the suggestions. The first was a letter to Cadwallader Evans in 1768, a part of which I shall give here. " . . . you mention the lead in the worms of stills as a probable cause of the dry belly-ache among punch drinkers in our West Indies. I had before acquainted Dr. Baker with a fact of that kind, the general mischief done by the use of leaden worms, when rum-distilling was first practiced in

New England, which occasioned a severe law there against them, and he has mentioned it in the second part of his piece not yet published. I have long been of opinion, that that distemper proceeds always from a metallic cause only; observing that it affects, among trades-men, those that use lead, however different their trades, as glaziers, letter founders, plumbers, potters, white lead makers, and painters; (from the latter, it has been conjectured, it took its name colica Pictonum, by the mistake of a letter, and not from its being the disease of Poicton) and although the worms of stills out to be of pure tin, they are often made of pewter, which has a great mixture in it of lead. . . ."

In another letter written eighteen years later to Benjamin Vaughn there is a long account of his observations on lead. "I recollect that when I had the great pleasure of seeing you at Southhampton, now a twelve months since, we had some conversation on the bad effects of lead taken inwardly. . . . The first thing I remember of this kind was a general discourse in Boston, when I was a boy, of a complaint from North Carolina against New England rum, that it poisoned their people, giving them the dry belly-ache, with loss of the use of their limbs. The distilleries being examined on the occasion, it was found several of them used leaden still heads and worms, and the physicians were of the opinion that mischief was occasioned by the use of lead. The legislature of Massachusetts thereupon passed an act, prohibiting under severe penalties the use of such still heads and worms thereafter."

Franklin in this same letter goes on to tell of an experience with lead in England. "In 1724, being in London, I went to work in the printing house of Mr. Palmer, as a compositor, I there found a practice I had never seen before, of drying a case of types, (which are wet in distribution) by placing it sloping before the fire. I found this had the additional advantage, when the types were not only dried but heated, of being more comfortable to the hands in the winter time. I therefore heated my case when the types did not need drying. But an old workman, observing it, advised me not to do so, telling me I might lose the use of my hands by it, as two of our companions had nearly done. . . . This, with a kind of obscure pain, that I sometimes felt, as if it were in the bones of my hand, induced me to stop. But talking afterwards with Mr. James, a letter founder in the same close, and asking him if his people who worked over the little furnaces of melted metal were not subject to that disorder, he made light of any danger from the effluvia, but ascribed it to the metals swallowed with their food by slovenly workmen who went to their meals after handling the metal without well washing their fingers, so that some of the metalline particles were taken off by their bread and eaten with it."

In this same letter he tells further of another experience with lead. "In America I have often observed that on the roofs of our shingled houses, where moss is apt to grow in northern exposures, if there is anything on the roof painted with white lead—there is constantly a streak on the shingles from such paint down to the eaves, on which no moss will grow, but the wood remains constantly clean and free from it. We seldom drink rain water that falls on our houses, and if we did, perhaps the small quantity of lead descending from such paint might not be sufficient to produce any sensible ill effect on our bodies. But I have been told of a case in Europe where a whole family was afflicted with what we call the dry belly-ache, of colica Pictonum, by drinking rain water. . . . On another occasion I had the curiosity to examine the list of names of patients afflicted with the malady and found they were all of trades that, some way or other, use and work in lead.

" . . . This, my dear friend, is all I can at present recollect on the subject. You will see by it that the opinion of this mischievous effect from lead is at least above sixty years old, and you will observe with concern how long a useful truth may be known and exist before it is generally received and practised on."

The common cold was a favorite topic of Franklin's, and many consider his writing on this subject his nearest approach to a real medical article. He had very sensible views even though they were not accepted in his day. He repeatedly stated that colds were caught by being in close, unventilated rooms in which there were other people who were affected. He thought damp clothes might cause colds, but that clothes wet with sea water would not, because, as he says, no clothes could be as wet as water itself and one did not catch cold while bathing or

swimming. A few of his letters might be given to support his views.

" . . . I have read that a man, hired by a physician to stand by way of experiment in the open air naked during a moist night, weighed near three pounds heavier in the morning. I have often observed myself, that, however thirsty I may have been on going into the water to swim, I am never so in the water. The imbibing skin pores, however, are very fine, perhaps fine enough in filtering to separate salt from water, for, though I have soaked by swimming, when a boy, several hours in the day for several days successively in salt water, I have never found my blood and juices salted by that means, so as to make me thirsty or feel a salt taste in my mouth; and it is remarkable, that the flesh of sea fish, though in salt water is not salt.

"Hence I imagine, that, if people at sea, distressed by thirst when their fresh water is unfortunately spent, would make bathing tubs of their empty water casks, and filling them with salt water, sit in them an hour or two each day, they might be greatly relieved. Perhaps keeping their clothes constantly wet might have an almost equal effect, and this without danger of catching cold. Men do not catch cold by wet clothes at sea. Damp, but not wet linen, may possibly give colds, but no one catches cold by bathing and no clothes can be wetter than water itself. Why damp clothes should then occasion colds is a curious question, the discussion of which I reserve for a future letter. . . . ."

Another letter to Miss Stevenson in June 27, 1769, continues the above discussion. " . . . I take this opportunity to send you also, a late paper, containing a melancholy account of the distresses of some seamen. You will observe in it the advantages they received from wearing their clothes constantly wet with salt water, under the total want of fresh water to drink. . . . I need not point out to you an observation in favor of our doctrine, that you will make on reading this paper, that, having little to eat, these people in wet clothes day and night caught no cold. . . ."

Franklin never wrote the promised paper on colds, but from his "Preparatory notes and Hints for Writing a Paper concerning what is Called Catching Colds," we can form a very clear conception of what the paper would have contained. A few statements from these notes might be of interest here:

"*Definition of a cold.* It is a siziness and thickness of the blood, whereby the smaller vessels are obstructed, and the perspirable matter retained, which being retained offends both by its quantity and quality; by quantity as it over fills the vessels; and by quality as part of it is acrid, and being retained produces coughs and sneezes by irritation.

"Present remedies for a cold should be warming, diluting and bracing.

"With some Mucous Matter the nose is sometimes almost stopped and must be cleared by strong blowing. In the windpipe and on the lungs it gathers and is impacted so as sometimes to induce a continual coughing and hawking to discharge it. It is not easily discharged but remains long adhering to the lungs, it corrupts and inflames the part with which it is in contact and a partial putrefaction begins to take place, hence consumption. Part of the corrupted matter, absorbed again by vessels and mixed with the blood, occasions hectic fevers."

In a letter to Benjamin Rush in 1773, we find the following reference to colds, " . . . I shall communicate your judicious remark relating to the septic quality of the air transpired by patients in putrid diseases, to my friend, Dr. Priestly. I hope that after having discovered the benefit of fresh and cool air applied to the sick, people will begin to suspect that possibly it may do no harm to the well. I have not seen Dr. Cullen's book, but am glad to hear that he speaks of catarrhs or colds by contagion. I have been long satisfied that besides the general colds now termed influenzas, (which may possibly spread by contagion as well as by a particular quality of the air), people often catch cold from one another when shut up together in close rooms and coaches, and when sitting near and conversing so as to breathe in each other's transpiration; the disorder being in a certain state. . . . From these causes, but more from too full living, with too little exercise, proceed in my opinion most of the disorders which for about one hundred and fifty years past the English have called colds."

Dr. Franklin discussed many other medical subjects with his friends. He wrote

a very good letter on the heat of the blood and its causes. He also remarked that bathing or sponging with water or spirits would reduce the temperature by evaporation in fevers. Sleep, deafness, sea sickness, constipation, diarrhea, all engaged his attention. His observations on gout, which were personal, are extremely interesting, shrewd, and exact. He makes mention of this malady in many of his letters, and gives his methods of treating it. In 1780 he wrote a dialogue between himself and the gout. A glimpse at its beginning will show the type of paper it was:

FRANKLIN: Eh! Oh! What have I done to merit these cruel sufferings?

GOUT: Many things. You have ate and drank too freely, and too much indulged those legs of yours in their indolence.

FRANKLIN: Who is it that accuses me?

GOUT: It is I, even I, the Gout.

FRANKLIN: What! my enemy in person?

GOUT: No, not your enemy.

FRANKLIN: I repeat it; my enemy; for you would not only torment my body to death, but ruin my good name; you reproach me as a glutton and a tippler; now all the world, that knows me, will allow that I am neither the one or the other.

GOUT: The world may think as it pleases, it is always very complaisant to itself, and sometimes to its friends; but I very well know that the quantity of meat and drink proper for a man, who takes a reasonable degree of exercise, would be too much for another, who never takes any. . . ."

Many times Franklin mentions the use of various drugs in disease, but an attitude of skepticism of empirical remedies is very obvious. He treated nervous disorders by electricity, a practice which became known as Franklinism; but even in this he gives a very conservative estimate of its true value. On this subject he was often consulted, and called upon for treatments. He also was interested in vital statistics, particularly in relation to the death rate of foundlings and among children not nursed at the breast by their own mothers.

Still other medical subjects recorded in his letters to his friends are cold baths, fresh air, fever and ague, hernia, and stone in the bladder, a malady from which he suffered. It was his ability and knowledge in everything pertaining to medicine that led to his appointment by the King of France to a commission, which investigated Mesmer, and it was Franklin who wrote the report.

Many of Dr. Franklin's friends, with whom he was in intimate contact on the Continent and in America, were medical men. He was made a member of their societies, and was considered by many people a physician. In closing let me quote the recent writing of William Pepper: "It is interesting to speculate upon the kind of a physician Franklin would have made, and I believe all will agree with me, in feeling that with his great common sense, his so pleasing personality, his wonderfully wide knowledge, his extraordinary tact, his way of getting what he wanted, his ability to make friends, his insight into human character, his love of investigation, and in fact everything that goes to make up the truely big man in the medical profession, he would, had he devoted himself to medicine almost exclusively, now be considered one of the greatest physicians of our country. Well indeed, even as it is, did he merit the title of Doctor of Medicine, and it is our loss that we can claim him only as a sort of adopted father of the profession."

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Commissioner
LANSING, MICHIGAN

TYPHOID FEVER IN MICHIGAN

The general trend of the incidence of typhoid fever in this country has been almost constantly a decline for quite a few years. In Michigan the death rate from this cause in 1900 was 34 per 100,000 population. The decline in Michigan from that time has also been almost continuous with a few slight breaks in the curve.

In 1929 the Michigan typhoid death rate was 1.7; in 1930 it was 1.8. The cases reported in 1929 were 310 or a rate of 6.4; the number of reported cases in 1930 was 504 or a rate of 10.4. Thus the increase in the number of reported cases in 1930 over that of 1929 was greater than the increase in the death rate. This factor is an indication that a larger percentage of the cases occurring were reported in 1930 than in 1929. It is generally accepted that the case fatality rate of typhoid in any large number of cases runs quite uniformly at about 10 per cent. That is, there actually occur about ten cases for every reported death. If this be so, we had, in 1929, 38 per cent of the actual cases and in 1930 about 58 per cent reported.

The great reduction during the last thirty years in the amount of typhoid has been due in large part to improvement of city water supplies and in a somewhat lesser degree to pasteurization of milk. Other factors, of course, have played their parts. There is still some room for improvement in some of our public water supplies and there is more room for improvement in our milk supplies. Nevertheless, there is a tendency to a flattening of the downward curve of typhoid incidence. That which is left is more endemic or small outbreaks than large epidemics. It is more rural than urban. It is due more to the carrier or the missed case that infects a small circle of relatives or neighbors through handling of food, contamination of a private water supply, or a small raw milk supply.

In determining the source of a typhoid case it is not enough to conclude that it is due to well water which has been shown by laboratory test to contain gas-forming organisms. Typhoid does not originate in water or milk. The question remains *who* is the source from which the water, milk or food was contaminated. The problem is to find the case or the carrier responsible.

The Michigan Department of Health is endeavoring (1) to bring its list of known typhoid carriers just as near up to date and complete as possible; (2) to have all cases reported; (3) to release cases from isolation only after two specimens of urine and stools negative for typhoid bacilli. It follows of course that carriers should be properly instructed and observed so that they will not endanger the public by careless habits or handling of food; that cases will be properly cared for as to spread of infection; and that typhoid immunization will be carried out for those exposed or for vacationists and others liable to be exposed or infected.

The success in such a campaign is dependent almost entirely on the coöperation of local health officers and practicing physicians. Let us see that far more than 58 per cent of our probable cases is reported this year; redouble our precautions in handling of cases; release only after at least two negative specimens; look out for the carrier; immunize more often. The peak of the yearly incidence of typhoid is usually in August and September. There is still a chance to prevent many cases and deaths this year.

C. D. B.

SUMMER RESORT INSPECTION

With the arrival of the vacation season, the subject of summer resorts assumes its annual significance. A fairly comprehensive picture of the situation in Michigan has been given by the intensive inspection program carried on by the Michigan Department of Health for the past two years, comprehensive at least from the standpoint of sanitation.

Seventy-six counties were entirely covered by resort inspectors during the summer of 1930; three counties, Lake, Osceola and Clare, were partly covered; and in four counties, Gladwin, Arenac, Shiawassee and Wayne, no work was done. The shortness of the resort season and the long distance to

be travelled make difficult the completion of the program. Work was started on June 23 and finished on August 30. A total of 1,907 resorts were visited and 1,779 water samples were collected.

Until the summer of 1929, data on the location of resorts were both incomplete and inaccurate. On the basis of the fragmentary figures that were available, the state was divided into six districts and an inspector assigned to each district. Each man did all the work in his district, including the inspection of milk supplies. Experience of 1929 showed that the boundaries of the districts should be changed somewhat, but in general the divisions were adhered to, in 1930. It was decided to have five inspectors instead of six, and to add two dairy inspectors to the staff. This made possible the covering of more territory than was included in the inspection of 1929, and the more thorough inspecting of milk supplies. One result of the more rigid investigation of dairies was a lowering in the rating of some of the resorts, a fact that occasioned considerable explaining.

The progress of resort inspection since it was first started in 1913 is shown in the following brief tabulation of inspections:

Year	Resort	Counties
1913	77	11
1916	173	29
1917	48	15
1920	59	12
1921	134	10
1922	152	15
1928	225	24
1929	1,663	68
1930	1,907	76

The rating of the resorts in 1930 follows:

	Ratings					
Type	A	B	C	D and under	Not rated	Total
Amusement Resorts	35	82	85	99	78	379
Clubs	16	17	8	6	19	66
Community Resorts	47	134	110	100	228	619
Camp Fire Girls Camps	4	2	0	1	0	7
Boy Scout Camps	19	13	7	4	9	52
Girl Scout Camps	7	4	2	0	0	13
Hotels	72	145	85	48	20	370
Profit Camp	19	23	7	1	7	57
Tourist Camps	36	52	67	66	22	243
Welfare Camps	20	25	8	5	5	63
Y. M. C. A. Camps	7	8	7	1	3	26
Y. W. C. A. Camps	5	5	1	1	0	12
Totals	287	510	387	332	391	1907

DIPHTHERIA STUDY AT LAPEER

Working with Dr. R. L. Dixon and the staff of the Michigan Home and Training School, investigators from the Laboratory of the Michigan Department of Health have been for the last month checking up on the susceptibility of the children in the school to diphtheria. In 1921 all residents at the institution were tested for susceptibility and immunized with toxin-antitoxin mixture. As the population is relatively permanent, this eleventh year check-up is returning some very valuable information about diphtheria immunization in general. Questions of duration of immunity, the value of the Schick in testing susceptibility and the question of carriers in an immunized population are all receiving the attention of the investigators.

The report of this study will answer many questions that are constantly being asked. A final report will be available some time during the summer.

C. C. Y.

CHILD HYGIENE ACTIVITIES

Arrangements have been completed in Grand Traverse County by Esther Nash, R.N., and Annette Fox, R.N., for a series of Women's Classes to be conducted by Dr. Muriel Case and Miss Helen Linn.

Women's Classes in Oceana County, begun May 4, have been in charge of Dr. Ida M. Alexander, with Miss Linn assisting her.

Child Care Classes in Isabella and Clare Counties, carried on by Bertha Cooper, R.N., have been completed and Miss Cooper has begun a breast feeding campaign in Clare County.

Sylvia Krejci, R.N., for the past eight

years a member of the staff of the Bureau of Child Hygiene and Public Health Nursing, has resigned and has returned to her home in Iowa. Miss Krejci began work with the Health Department as nurse with the infant clinic, which was part of a traveling health institute, later discontinued. Miss Krejci has also conducted Child Care Classes and breast feeding campaigns and has carried on highly successful prenatal nursing services in Grand Traverse, Clinton, Ionia and Mason Counties.

The Child Care Classes taught by Caroline Hollenbeck, R.N., in St. Clair County, have been finished. Eaton County is to have the services of Miss Hollenbeck to carry on an infant and prenatal program.

L. R. S.

TRAINING PROSPECTIVE RURAL TEACHERS

The contribution of the Michigan Department of Health to the training of this year's group of 1,258 prospective rural teachers was completed on June 3 when the last of the special lectures on applied hygiene was given before the forty-eighth county normal training class. This closed the series of six lecture-demonstrations carried on since last October by a staff of six speakers, four from the Department of Health and two from the Department of Public Instruction.

A short course in hygiene has been required for years in the fifty county normal training classes in the state. To supplement this course and to make clearer its application to rural school situations, the Michigan Department of Health began a series of lectures in 1928. This was so well received that it was continued in 1929, and in 1930 it was expanded to take in representatives from the Department of Public Instruction.

Each training class received six lectures given, one each week, for six successive weeks. The essentials of personal, mental and social hygiene, prevention of communicable diseases, health inspection of pupils, mouth health, organized play periods, the school health program and visual aids in teaching health were the topics discussed. Material presented was directly applicable to rural schools and was demonstrated whenever possible.

"Reason becomes merely an organ that has been developed by man's effort to adapt himself to his environment and is essentially related to his struggle for existence as is the speed of the deer or the scent of the beast of prey."

—CHRISTOPHER DAWSON.

OF GENERAL MEDICAL AND SURGICAL INTEREST

PRESENT CONSIDERATION AND CARE OF COLON

JOHN A. LICHTY, Clifton Springs, N. Y., calls attention to those functional disturbances of the large bowel which are frequently the cause of considerable concern to the patient and annoyance to the attending physician. Among the functional disturbances of the bowels are certain irregularities due to an atonic condition at times or, again, to a spastic condition of the colon. With these disturbances of motility there are also secondary disturbances, and these together may gradually develop a mild irritative condition of the mucous membrane, with a production of stringy mucus, ordinarily called mucous colitis, and attributed to a neurogenic origin. There may gradually develop a more or less catarrhal condition with a production of flakes or clumps and strings of mucus containing innumerable leukocytes. Others of these functional disturbances are dilatation and sagging of certain portions of the colon, due either to congenital defects or to developmental changes. On account of the attempt at a compensatory restoration of function, extraperitoneal folds are formed. Also on account of continual traumatic insult there may develop weblike adhesions. With all these disturbances which may take place in or about the colon, the patient almost invariably develops a certain degree of invalidism characterized by psychic and neurotic symptoms. Other symptoms more constant and probably more significant are irregularity of the bowels, such as constipation and occasionally diarrhea, an accumulation of gas in the abdomen, producing an annoying borborygmus, irritation and soreness in the course of the colon, and an occasional pain and bearing down sensation, especially in the lower part of the abdomen. The pain may be very severe, especially before there is a stool, usually consisting mostly of mucus. The pain may occur suddenly and be cramplike in character, mimicking acute appendicitis, gallstone attacks, renal colic or duodenal ulcer. Before undertaking the treatment of these patients with chronic disturbance of the colon, one should obtain a certain concept of the state of the nervous system. This is accomplished largely through a painstaking, careful history. Also the disturbances of the secretory activities of the alimentary tract should be known. Such information as is obtained from gastric analysis, duodenal drainage and examinations of the stools is helpful. It is desirable to make all these studies in a definite and concise order before the treatment is planned. Uncertainty on the part of the physician will soon lead to an unfortunate psychologic reaction on the part of the patient. Every effort should be made to overcome anxiety and nervous strain. The diet should be nutritious so as to maintain a normal, or somewhat higher than normal, body weight for a time. The diet should not be bulky, coarse and irritative when the case is first undertaken. In the early stage of the treatment, it is well to purée the vegetables and stew the fruits. Abundance of fat in the way of butter, cream and olive oil should be given. Irritating cathartics should be avoided; they are not necessary if fats and fluids are given in sufficient quantities. If medication is necessary, on account of constipation, it should be determined largely by the degree of spasticity of the bowels and the acid content of the gastric juice. Constipation with a spastic bowel and a high gastric acidity yields more readily to an alkaline laxative, such as magnesium oxide with the

addition of belladonna or its derivatives, whereas the atonic bowel with low gastric acidity will yield more readily to bitter laxatives, such as the cascara preparations with the addition of nux vomica and its derivatives. As the symptoms of the irritable colon disappear the diet should be changed by allowing more roughage and a more even balance of carbohydrates and fats. This will usually control the irregularity of the bowels that gives such concern. Frequently patients with an irritable or a sluggish colon will resort to large and repeated enemas. The natural condition of the colon, however, is to be more or less full, and any attempt to keep it empty by strong laxatives or large enemas or flushings is based on a misconception of the function of the colon and will be likely to cause harm. The colon should have the same consideration and care in relation to disease as any of the other viscera and should not receive any more abuse than any other organ when there seems to be a dysfunction.—Journal A. M. A.

CLINIC AS CENTER OF GRADUATE STUDY

Henry A. Christian, Boston, believes that the most potent postgraduate clinical instruction in the early period of the medical man's life is afforded by the internship and residentship in a well organized, efficiently run hospital. The medical school curriculum of today really is planned as a preparation for a hospital service. The most important influence of teachers in the clinical branches of medicine is not exerted within the medical school on medical students but within the clinic or hospital on recent graduates in medicine. The clinician's pupils or disciples are not the large body of his medical students but the small group of his interns or house officers and his residents. To these he imparts the discipline of his leadership. These he conducts in their learning. In the sense of graduate instruction in a university, the resident group form the clinician's seminar. Such a relationship is possible only in a clinic organized with a chief of service giving largely of his time and effort to the conduct of the clinic and at heart a teacher and investigator, in a clinic adequately staffed, provided with necessary laboratories capable of more than routine examinations, and peopled by not too many patients. The latter is important. The majority of American hospitals have too many patients in ratio to staff, and particularly in ratio to resident staff, for them to be significant centers for graduate study. No hospital will attain to the level of a genuine graduate school in clinical branches of medicine, unless it has enough patients to afford numerous examples of disease of many types and enough members of the resident staff, so that each patient may be studied thoroughly and not too hurriedly by one or several of them. A distinction needs to be made between the graduate study of a clinical branch of medicine and an apprenticeship in one of them. The latter is more analogous to what is known in medical circles as postgraduate study. That there is such a difference seems largely to be lost sight of at present. As in any other scheme of graduate instruction, leadership is far more important than material facilities, and it is in real leadership that clinics in this country are weakest. In a teaching clinic the leadership of the chief of service looms large in the success of the clinic in graduate instruction. It would seem an almost necessary qualification that the chief of a teaching clinic should have a broad grasp of the entire field of his clinical endeavor as well as a special knowledge of some particular subdivision of the field. He should be a clinician of wide experience and one steeped in the literature and lore of his domain in medicine. He should be familiar with the methods of investigation and have some accomplishment in investigation to his credit. In conclusion, the author emphasizes that the first concern of every hospital should be the best possible care of the patient. Nothing, however advantageous for the education of physicians or nurses, should be tolerated if it detracts in any way from the effectiveness of the care of the patient in the effort to mitigate his discomfort and to speed his recovery from his sickness. Those concerned primarily in the educational aspects of the clinic must have this constantly in mind.—Journal A. M. A.

SPONTANEOUS PNEUMOTHORAX

J. P. Palmer and Robert B. Taft, Charleston, S. C., report five cases of spontaneous pneumothorax that they observed in one clinic in a relatively short time. Although in most cases the collapse of the lung was complete, the symptoms were unusually mild and of less than the average duration. The most unusual feature is the fact that there were two cases in which there was a massive hemorrhage into the pleural cavity. In reviewing the literature there were no cases found in which there was an associated hemorrhage of this extent.—Journal A. M. A.

MENTAL HEALTH AS A NATIONAL PROBLEM

Ray Lyman Wilbur, Washington, D. C., states that public handling of the insane is necessary, but that present methods can be greatly improved. The present cost for the segregated care of the insane is enormous and it is evidently growing. While this is a most difficult medical problem, unfortunately much of it is handled through the police and the courts. To have the policeman instead of the doctor as the first contact of society with many of those in the early stages of insanity is deplorable. It is even worse when the first confinement of such a patient is in the jail rather than in the hospital bed. There should be united effort to care for mental cases along the best hospital and medical lines, and there should be as complete a release as possible from the meshes of the law which now are so difficult to escape. The former days of simple life are gone. By millions, people tramp the solid streets of our cities Their nervous systems are constantly under assault. The prevention of mental disorders can never be brought about by such processes as putting chlorine in the water of a city to eliminate typhoid. They are much more intricate and difficult but just as important. Prevention of mental conditions goes back to industrial organization, city planning, the handling of schools, the standards of living, the sanctity of the home, and a hundred other social mechanisms. The mental health of a nation depends on the brain fiber of its people. If one were handling such a question for animals, one would try to master it by controlled breeding. Just how bitter the lessons will have to be before one learns to meet human conditions in this way, no one can say. In summary, the author suggests that the mental health of a nation is its greatest asset. Mental hygiene is a vital part of preventive medicine. Medical students and physicians need more adequate training in psychiatry. There should be interns in every hospital for the care of the insane. The presence of the inquiring student would do more to advance pathology, increase autopsies and develop research in mental hospitals than any other factor. More of the research energy of the medical profession should be diverted into the difficult fields of psychology and psychiatry. Education of the public so that they will view mental diseases as they do other diseases is important. The handling and care of the mentally ill should be dealt with along medical rather than along legal lines.—Journal A. M. A.

THE JOURNAL

OF THE

Michigan State Medical Society

PUBLICATION COMMITTEE

J. D. BRUCE, M.D., Chairman.....Ann Arbor
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B. H. VAN LEUVEN, M.D.....Petoskey

Editor
J. H. DEMPSTER, B.A., M.D.
641 David Whitney Bldg., Detroit, Michigan.

Business Manager and Editor County Society Activities
FREDERICK C. WARNSHUIS, M.D., D.Sc.
2642 University Avenue, St. Paul, Minnesota, and
Grand Rapids, Michigan

All communications relative to exchanges, books for review, manuscripts, should be addressed to J. H. Dempster, M.D., 641 David Whitney Bldg., Detroit, Michigan.

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JULY, 1931

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

WALTER HULME SAWYER

Doctor Sawyer passed away from a heart attack while playing golf with his son, Tom, and two friends at the Hillsdale Country Club on the afternoon of April 22.

Walter Hulme Sawyer was born in Huron County, Ohio, seventy years ago. His parents had been prosperous but lost everything in the panic of '73, so that it was necessary for Walter to work summers in order to help defray the expenses of his education. He graduated from the Grass Lake (Michigan) High School with honors in 1880, and the Medical Department of the University in 1884. The record shows that he had a perfect mark in Anatomy. He was rewarded with an internship and often spoke of the busy year spent in the University Hospital. The Hospital was understaffed and the work was so arduous that at the end of the year he was not allowed to continue on account of the condition of his health. Soon after leaving the Hospital he settled in Hillsdale, where his health soon righted itself and where for almost forty-five years he was the best known and best beloved physician of his community.

Hillsdale is replete with anecodotes of the Doctor. Many years ago, long before the coming of antitoxin and when the operation for obstructive diphtheria was in its infancy, the Doctor made a long, cold drive in consultation, only to find his patient suffering from the dread complication. He was without instruments, but with his pocket knife he opened the trachea and with hairpins kept the passage open until he returned some hours later with a tracheotomy tube, with the gratifying result of relieving the condition.

Then, there is the story of the New York Central wreck in the railroad yards at Hillsdale, with the engineer pinned beneath an overturned engine, being scalded as well as crushed. At the risk of being severely burned, the Doctor crawled under the wreckage and, finding the engineer's leg injured beyond repair, rapidly amputated it and dragged him to safety. For years after he was known as the "Jackknife Surgeon."

What the people think most about was the Doctor's never failing friendliness—a nod, a smile, and a cheery word for everyone. There are many of the older people who still remember the old white horse "Billy," which the Doctor drove for many years. Billy had a trick of tossing his head that gave the appearance of nodding. This it was thought he learned from his master who bowed so courteously to everyone he met.

In 1888, Doctor Sawyer was married to Harriet B. Mitchell, a lovable, kindly gentlewoman whose loyal support and keen understanding of a physician's responsibilities helped greatly in a successful and happy partnership and in their lives of great community usefulness. Several years ago they presented the old family residence to the city as a library. This was but one of the many ways their joint influence was felt in the community. Two years ago Mrs. Sawyer passed away, her passing as peaceful and as

sudden as the Doctor's. Following Mrs. Sawyer's death, Thomas M., their only son, together with his wife and two young grandsons, went to live with the Doctor. This was a very happy association which continued until his death.

While Hillsdale County knew Doctor Sawyer as a family doctor, it also looked to him for guidance and leadership in practically every community enterprise. For thirty-two years he served on the School Board, and was a Trustee of Hillsdale College, which in 1926 conferred upon him the Degree of Doctor of Laws.

"Doctor Sawyer was first elected a Regent of the University of Michigan in 1905, and was three times successively re-elected, in 1913, 1921, and 1929. His twenty-five years of service as a Regent, the longest recorded in the history of the University, made him acquainted, as few others have been, with the institution's work in all its phases, with its problems, its personnel, and its relations to the State. His qualities of heart and mind well fitted him to utilize this knowledge for the benefit of the University of which he was a devoted alumnus. His clear vision pierced the essentials of a situation; his courageous honesty faced them; his good sense helped him and his colleagues to the solution; and his readiness to understand and sympathize with others, characteristic of the good physician, were invaluable in the personal dealings incidental to the transaction of University business. Through the quarter century of his regentship he retained the liberality and enthusiasm of youth, combined with a mature and sane judgment; new ideas did not repel him, if they were sound; and he was governed neither by hobbies nor by prejudices." (From Resolutions of Board of Regents.)

His work during the World War was that of Contract Surgeon for the Student Auxiliary Training Corps, and it was strenuous work, especially during the influenza epidemic of 1918, when it was day and night service, not only in caring for his boys but his patients throughout the county. The Red Cross commanded a great deal of his energy, and his office was used by the Draft Board, of which he was a member, for the examining of recruits from Hillsdale County.

While his outstanding public service was in his capacity as a Regent of the University, where the Medical School, University Hospital, and the Student Health Service benefited greatly through his special training, he also rendered very great service to the State Medical Society, which he served as Councilor for several years, and as President in 1913 and 1914. He was also a member of the State Board of Registration from 1898 until 1906.

In politics, Doctor Sawyer was an ardent Republican and served on the Republican State Central Committee from 1894 until 1898, but notwithstanding the many offices, political and otherwise, held by him, his qualities were more those of the statesman than the politician. The statesman is altruistic in all that pertains to civic and industrial life; the politician too often self-seeking, which Doctor Sawyer never was.

We have spoken of his capacity for making friends. An observation of the late Doctor C. B. Burr refers to his devoted friend in these words: "Sawyer had the spirit of a boy. I loved to have him drop in on me at any time, even when one may not have his house in order to receive company. I love that merry chuckle of a laugh." Burr and Sawyer were such devoted friends that mention of one to many who knew them both well will call to mind the other. They were attached to each other with that intimacy that makes such friendships most admirable. Both are gone.

As I write these lines, touching here and there an incident in the life of Doctor Sawyer, I cannot but realize how futile the best and most heartfelt appreciation of him must be. To those fortunate enough to know him, the message that he had passed on was, indeed, a sad one. To those who knew him but slightly, or not at all, one must create a picture of cheery sunshine, of hopefulness and confidence, of kindly helpfulness, of broad charity, of a very practical idealism, which combined to make him the ideal physician and whole-souled companion that he was. His was a sturdy manliness that found expression in the most enduring of friendships, and in those things that brought men together most happily—in bridge, and golf, and in hunting and fishing—he was the ideal companion. He loved life and delighted in comradeship.

Upon the occasion of his last visit with the writer, the Doctor was momentarily depressed when he described a chest pain from

which he suffered the day before during a golf game. While in this mood he remarked upon how quickly the memory of us fades and he seemed saddened by the thought. Those of us who have given more than passing thought to this realize, with a pang, perhaps, the inevitableness, as well as the wisdom of it. But in another and in a more vital sense men like Sawyer are never really forgotten. They live in the added courage which their cheery smile and firm handclasp have passed on to all with whom they come in contact, in the opportunities for better citizenship which their work has made possible, and through many ways of which there is no accounting or record. Those of us who knew and loved him are fully confident that the things this gallant gentleman lived for will never die.

In the envelope which contained his Will were found two clippings—"The House by the Side of the Road," and the following lines:

"Spare me from the bitterness, and the sharp passions of unguarded moments,
May I not forget that poverty and riches are of the spirit,
And although age and infirmity overtake me, and I come not within sight of the castle of my dreams,
Teach me to be thankful for life, and for time's olden memories that are good and sweet,
And may the evening's twilight find me gentle still."

JAMES D. BRUCE

ALDRED SCOTT WARTHIN

In the passing of Dr. Aldred Scott Warthin the medical profession of the State has lost one of its most distinguished members. It has been my pleasure to have known the doctor from his earliest connection with the University. He was then George Dock's assistant in clinical medicine. The class of '94 remembers very well how thoroughly he took us through Osler's Practice of Medicine. In one of the latest papers which he wrote, "Forty Years as a Clinical Pathologist," he tells how Dock and he developed a laboratory of clinical medicine and how this work, under the man who has inspired so many to do real things in medicine, started him in the development of a department of clinical pathology that is probably second to none in the world today. After three seasons in Vienna he became in '95 the practical head of the department of pathology. Shortly after his taking charge the Regents passed a rule that all surgical material received in the University hospital became the property of the pathological laboratory and must be sent there accompanied by the history of the case for diagnosis. Today records of over 150,000 cases are immediately available for comparative study. In this same paper his great regret is that not enough years were available to him for use of this material. In his first year Warthin worked alone, and aside from his teaching largely based on material brought from Vienna he had only 158 cases and 12 autopsies. Last year with a personnel of 24 in his department he handled 18,194 diagnostic cases and 401 autopsies. When he took charge if the surgeon had a report on the material sent to the pathologist within a week he was fortunate. In recent years all diagnoses are sent to the clinician by 12 o'clock of the day following the operation. He was never very enthusiastic about the frozen section method of diagnosis, which he limited to a very small field.

Warthin was a man of very decided opinions which were often far in advance of the times. He early recognized the part played by heredity in disease, particularly in the case of cancer; the importance of cardiovascular syphilis, the constitutional foundations of Graves' disease, toxic goiter, the rarity of the relation of gastric ulcer to carcinoma. His early conception of the neoplastic nature of chloroma, the leukemias and Hodgkin's Disease is well known. Nearly all of his positions on these mooted questions he had the pleasure of seeing generally adopted. To quote him again in this same article, "He who is convinced and waits patiently receives his reward." Later he says, "The only sad thing about it is the remaining span of life may be so short that other of one's advanced ideas cannot reach settlement." He had had warnings, the meaning of which he knew all too well, that his end was not far away.

His was the joy of doing work that he loved and of performing it well. The last lines of his "Creed of the Biologist" apply to this remarkable man. "He played the game of life squarely and according to the law."

G. E. MCKEAN.

POLICIES DEFINED

A meeting of the Council of the Michigan State Medical Society was held on May 19. A verbatim report of this meeting, to which the attention of the reader is directed, appears in this number of the Journal, so that extended editorial comment will not be necessary. To the meeting a number of organizations which are concerned to a greater or less extent with public health (six in all) were invited to deliver brief addresses which in the main defined the scope and object of their work. Dr. C. C. Slemons, medical health officer of the State of Michigan, outlined the history as well as policy of the Michigan State Department of Health. He pointed out, among other things, the fact that his department aimed at assisting the medical profession, stating that the activities of the laboratory department were commensurate only with the demands that the medical profession made upon it.

Dr. Bernard W. Carey represented the Couzens Foundation. He said that the object was one of investigation of health conditions with particular reference to children; that the Foundation aimed at rendering a service which in no way interfered with the work of the medical profession. Considering the magnitude of the undertaking, it was unavoidable that certain conflicts with the profession may have at times arisen. He invited criticism and assured the Council that, where mistakes had been made in the way of encroachments in the field of medicine, he would be only too glad to see that such mistakes occurred as infrequently as possible in the future. He invited representation on the committee from the Michigan State Medical Society and was assured in turn by Dr. Corbus, Chairman of the Council, and by Dr. Stone, President of the Society, that a member of the profession to represent the Michigan State Medical Society would be appointed. In the absence of Dr. Stuart Pritchard of the Kellogg Foundation, Dr. Stone, President of the Michigan State Medical Society, described the aims and objects of that Foundation.

The Anti-Tuberculosis Association was sponsored by Dr. B. A. Shepard and Mr. Theodore Werle. The substance of Dr. Shepard's address was in effect that tuberculosis could never be conquered if left to the lung specialist. The tuberculous lesion must be apprehended in its incipiency and vigorous efforts put forth for a cure. This meant closer application on the part of the general practitioner who saw the majority of these cases in their early stages. Mr. Werle declared that the medical profession were the first social service workers and this function on the part of the profession could never be relinquished to the lay social worker, who must at most be an adjunct factor in the control of the disease. Dr. E. J. O'Brien, representing the State Sanatorium Commission, spoke on the same subject, emphasizing what he claimed a fact—that there was no such thing as chronic tuberculosis, that all tuberculosis was acute and that as an acute disease it demanded immediate and vigorous treatment. He minimized the employment of the usual physical methods of diagnosis and stressed use of the X-rays. Dr. O'Brien further claimed that tuberculosis was essentially a surgical disease and in his opinion physiological rest by means of collapsing the lung was the best method of treatment. He spoke of the inadequacy of State Sanatorium accommodation and deplored the fact that many hopeless cases were sent to occupy the limited number of beds, whereas curable cases, those with early lesions, were allowed to go without adequate treatment. Fully twenty per cent of the cases sent to the Sanatorium, according to Dr. O'Brien, did not have tuberculosis. The expense and inconvenience to the State and to this class of patients could have been avoided had X-ray examination of the chest been made. He advised some means whereby, in the more sparsely settled districts, portable X-ray apparatus might be employed as an aid in the diagnosis.

Dr. R. E. Patterson, President of the State Dental Society, represented that body. He said that the reports from the members of the dental profession were universally in favor of the work that was undertaken by the Couzens Foundation and mentioned in particular the researches of Dr. Bunting at the Dental School at Ann Arbor, who is making a special study of dental infections, and also the work of Dr. Samuel J. Lewis, who is making some extensive studies of bone development and dentition in children which is to cover a number of years. He expressed himself as highly gratified in hav-

ing an opportunity to ascertain the reaction of the medical profession towards the various foundations.

The Chairman read a newspaper clipping accompanied by a letter from a member of the medical profession of the State in which the doctor sought information in regard to the sending of a "load" of children from a certain county for tonsil operation at the University Hospital. The inference was that many of these cases might have been operated by local physicians. It was explained that the University Hospital did not invite such patients, that only through the examination and advice of a local doctor to the Probate Judge of the district would it be possible for patients to go to Ann Arbor and to be accepted for surgical or any other kind of treatment.

It is hoped that the reader will take the time to read the verbatim report, including the presentation of various organizations represented, together with the discussions, since a proper understanding on the part of those interested will go a long way to smooth out any difficulties that may arise.

TO CONTRIBUTORS

Apropos of our editorial in the June number of this Journal on the subject of writing medical papers a few suggestions are here made on the subject of proof reading. The galley proof is a long column of printed matter submitted for the author's revision. Assuming that the writer has exercised the utmost care in the preparation of his typewritten copy we will not expect any additions to or deletions from the paper after it is set up in galley form. The cost of typesetting is no small item and since additional charges are made for radical alterations after the matter is in type, all such changes may be avoided by greater care in the preparation of the original copy.

The proof reader connected with the publishing house, as a rule, has read and made corrections of the original proof, so that the proof sent to the author is a revision for the purpose of catching typographical errors that may have escaped the scrutiny of the professional proof reader. Proofs are also read by the editor, who endeavors to exercise particular care in checking over all corrections in the final page proofs.

Having received the galley proofs of an article the author should go over them carefully *at once*. A good rule to follow is to revise the proofs and mail them to the editor the same day they are received. As desirable as such promptness is in the chapters of books, it is much more important in periodic scientific or literary Journals which must appear on a certain day each week or month.

All corrections should be clearly made in ink on the margin of the galley proofs. The author should familiarize himself with the characters used universally in the correction of proofs. Since copy is now set by typesetting machines, the variety of possible errors is smaller than when type was set by hand.

When the author may find occasion to insert a word into the middle or near the beginning of a paragraph he should study to dispense with some other word of approximately the same number of letters; otherwise the insertion of a word may demand the resetting of almost the entire paragraph. The same care should be exercised in deleting words.

While the insertion of paragraphs or sentences or the elimination of sentences from the galley should be avoided, it is still permissible. To make such alterations in the page proofs would be an unpardonable sin, as it might necessitate altering the entire "make-up" of the publication. All of which goes to indicate the great pains that should go into the preparation of the original copy.

Proof-perfect articles are possible only after careful proof reading, going over the proofs several times. It is necessary to check up not only to see that all typographical errors have been corrected, but to see that in the process of making corrections no new errors have been made, for the insertion or deletion of a comma means the resetting of the entire line.

THE GREAT SILENT PROFESSION

According to a recent report of the Board of Trustees of the American Medical Association, there are approximately 2,500 contributions in the matter of scientific papers submitted for publication in the Journal of the American Medical Association in the course of a year. The scope of the Journal limits it to approximately 550 papers a year.

The capacity of state medical journals published once a month is of course much

smaller. The Journal of the Michigan State Medical Society in 1930 printed 120 contributed papers besides discussions and the other regular features that go to make up the Journal. The demand for space is becoming greater each year. The papers are for the most part of a high character. Some are returned to the writer on account of the great length, requiring as much space as should ordinarily be occupied by two papers. Never has the art of condensation in writing been more necessary than at present. As some one has facetiously remarked, to make an immortal address it is not necessary to make it eternal.

UNEMPLOYMENT AND THE MEDICAL PROFESSION

One of the most serious problems facing the medical profession today is that of unemployment. There is no profession or industry that is more affected by it. Not only does the burden of taking care of people of limited means and of no means at all fall upon the physician, but he has to contribute heavily as a taxpayer. The industrial cities of this State, particularly those whose expansion has depended upon two or three industries, are in a worse condition than those cities in which industries are more diversified. In the metropolis of the state the sum spent on caring for 45,000 destitute families during the past year, is said to amount to $20,000,000, to be met out of public taxation, which, owing to delinquent taxes, has shrunk to sixty per cent of the sum normally required to meet the current expenses of the city. The summer months will mean naturally a diminution in the amount spent in welfare work as industry gradually reabsorbs large numbers who were let out during the fall and winter. Detroit and Flint and other automobile centers have attracted workers from the whole world, with the result that the unemployment problem is more severe in these than in most other places.

People have been encouraged to leave the centers of unemployment and to return to their homes; approximately the sum of ten thousand dollars has been spent on transportation in one city alone. The young man and woman who have left the farm to come to the city with the lure of greater cash income would do well to return to the old home, if it be a farm where they with a little toil may be assured of a living.

Vast epidemics of unemployment with attendant want and discomfort are second only to epidemics of illness. The time has come when a remedy must be sought and it seems the only one is some form of unemployment insurance. As the situation is at present the actual taxpayer and the doctor bear an inordinate burden. An unemployment insurance plan should include the employer who has been able to expand his industry off the earnings of labor; it should also include the worker, who should contribute during his periods of employment, and the smallest part of the burden should fall upon the taxpayer. At present the taxpayer contributes everything, and industry, except in so far as industry is a taxpayer, very little. Some such scheme would be conducive to the worker's independence and self respect and enable him to meet his obligation with his physician as well as to meet other obligations.

VACATION

The time of year is again at hand when the majority of people look forward to that change in the year's routine which prevents "Jack from becoming a dull boy." The mind demands change, variety; not only does all work and no play make Jack a dull boy, but all play and no work has the effect of destroying his morale, as the nationwide unemployment demonstrates.

The ideal vacation is not one characterized by absolute passivity, but a period of time during which the mind is as fully occupied as when concerned with the daily concerns and duties. The mind is in no sense a vacuum. It must be concerned with something. Travel, particularly foreign travel, for those who can afford it, is an ideal way in which to spend the holidays inasmuch as it cuts a person off from his work and fills his days with new scenes and a new environment. For the physician a few weeks may be spent at some clinic where he can revise his medical lore, free from the anxiety and personal responsibility that go into the regular practice of medicine. But perhaps to get away from one's professional work entirely, even to the extent of not talking shop, is most desirable.

We feel, however, that he who depends

upon two weeks or a month in the summer for his recreation is not getting the most out of life. Recreation should be taken every day. The routine of one's daily life usually provides enough physical exercise so that the real recreation should be in the way of an intellectual change. The Italian historian, Machiavelli, had the right idea. "When evening has arrived I return home and go into my study. I pass into the antique courts of ancient men, where, welcomed lovingly by them, I feed upon the food which is my own, and for which I was born. Here I can speak with them without show, and can ask them the motive of their actions; and they respond to me by virtue of their humanity. For hours together the miseries of life no longer annoy me; I forget every vexation." Or as Cicero said, (for the older men in the profession only): "Hæc studia adolescentiam alunt, senectutem oblectant, secundas res ornant, adversis perfugium ac solatium præbent, delectant, domi, non impediunt foris pernoctant nobiscum, peregrinantur, rusticantur."

In taking this point of view we realize the busy practitioner cannot always seek seclusion after his day's work to the extent of having the whole evening to himself. Unfortunate, however, is the man who cannot find any time to explore that kingdom of books in which dwells the wisdom of the ages.

EDUCATION

Perhaps there is no other word capable of a greater variety of interpretations than the word education. Graham Wallas, the English economist, defines it as "a process by which human beings so acquire the knowledge and habits which constitute civilization as to be fitted to live well, both individually and in co-operation." This is certainly broad enough in its scope. We are accustomed to associate formal education with schools and colleges, often overlooking the fact that the greatest factor in our education is experience. We learn from our contact with others. As Wallas very aptly expresses it: "The function of teaching cannot be confined to professional teachers; civilization, although it is dependent on the economically organized work of the *'qualified'* teacher, is also dependent on the fact that the whole race are and must be *'unqualified'* teachers. We could not continue to exist in our present numbers unless mothers taught their babies from the moment of birth, unless brothers and sisters and husbands and wives, and neighbors and friends taught each other. Every employer and foreman, every housekeeping woman, every writer, thinker, artist, preacher, politician, doctor and policeman spends much of his time in teaching. In newspaper offices, theatres, debating societies, government departments, churches and chapels, libraries and factories much more effective intellectual stimulus and instruction may at any moment be going on than in the brick and stone buildings which are called schools and colleges."*

And the success of this all inclusive education depends upon the reaction of the individual. Nurture means a great deal more to some than to others.

"A very able physician once said to me, 'more than half of the work of the world is done by neurasthenics,' i.e., men who are easily fatigued can do, if allowed, as Darwin was, to take their time about it, an astonishing amount of useful work. This is largely true among the middle and professional classics. On the other hand, in nearly all decently paid manual occupations, a man must either do a full day's work or none at all; and some of the most tragic figures I have known have been intelligent and public spirited men, of the type well known in Revolutionary clubs and societies, who would have done quite well as part-time journalists or poets or professors but for whom as 'work shy' laborers no self-respecting way of life was possible."

—GRAHAM WALLAS in *Our Social Heritage.*

HIS FRIENDS!

"Do you want to know what I am doing? I devote myself to my friends, with whom I enjoy the most delightful intercourse. With them I shut myself in a corner, where I escape the windy crowd and either speak to them in sweet whispers or listen to their gentle views conversing with them as with myself. Can anything be more comfortable than this? They never hide their own secrets, yet they keep sacred whatever is intrusted to them. They never divulge abroad what we confide freely to their intimacy. When summoned they are at your side; when not summoned they do not intrude. When bidden they speak; when not bidden they are silent. They talk of what you wish, as much as you wish, as long as you wish. They utter no flattery, feign nothing, keep back nothing. They frankly show your faults, but slander no one, all that they say is either cheering or salutary. In prosperity they keep you modest, in affliction they console, they never change with fortune. They follow in all dangers, abiding with you even to the grave. Now that you may not miss the meaning of my metaphor, pray understand that all I have said about these friends to be meant of books, companionship with which has made me a truly happy man."

—*Erasmus.*

*Our Social Heritage. Graham Wallas.

DEATHS

DR. C. C. CLANCY

Dr. C. C. Clancy of Port Huron, President of the Port Huron Hospital Board, died at his home on May 19 at the age of seventy-two years. Although in poor health for a number of months Dr. Clancy continued his medical practice until the day before his death. He was a former President of the Michigan State Medical Society. He is survived by three sons, Gerald B. Clancy and Hugh C. Clancy of Port Huron and Joseph M. Clancy of Detroit. Dr. Clancy had practised his profession in Port Huron for forty-eight years, during which time he was actively identified with civic and community welfare work. He was an earnest worker in the movement to obtain a new hospital for Port Huron and lived to see his ambition in this regard brought to a successful conclusion.

Dr. Clancy was born in Ontario, where he attended public school in the town of Wallaceburg and high school in Chatham. He was a graduate of Assumption College, Sandwich, Ontario, as well as the medical department of Queen's University, Kingston, where he received his degree of Doctor of Medicine in 1883. He was a member of the school board as well as public library board of Port Huron and during the world war he was an examiner for St. Clair County. He was a member of the St. Clair County Medical Society as well as, for a number of years, President of the Society. Dr. Clancy's death marks the passing of a family physician who during his long practice had endeared himself to his city and community. The funeral services were held on the Friday following his death in St. Stephen's Catholic Church.

DR. ALDRED SCOTT WARTHIN

Aldred Scott Warthin, Professor of Pathology of the University of Michigan, died at his home in Ann Arbor on Saturday, May 23. Death was due to coronary thrombosis. He was born at Greensburg, Indiana, in 1866. He was educated at the University of Indiana, where he was graduated A.B. in 1888. He received his M.A. degree from the University of Michigan in 1890 and his M.D. degree, also from the University of Michigan, in 1891, and his Ph.D. degree in 1893. Dr. Warthin had done extensive post-graduate work in medicine in Vienna and Freiburg. He was married in 1900 to Dr. Katharine Angell of Chicago. Dr. Warthin was Professor of Pathology and director of the pathological laboratory of the medical department of the University of Michigan since 1903. He was President of the American Association of Pathologists and Bacteriologists in 1908 and President of the International Association of Medical Museums 1910-13. He was editor of the Annals of Clinical Medicine up to the time of his death. Dr. Warthin wrote extensively on his special subject, pathology. He was editor and translator of the tenth edition of Zeigler's General Pathology in 1903 as well as the eleventh edition in 1908. He had written over one thousand articles in medical journals and textbooks. His most important research was in the anatomy and pathology of the hemolymph glands and the pathology of diseases of the blood and blood forming organs, cardiac syphilis, latent syphilis, tuberculosis and toxic action of mustard gas.

Dr. Warthin was internationally noted as a teacher of pathology. While never at any time connected as a practising physician, with the Michigan State Medical Society, his influence in Michigan medicine as well as American medicine has been very great, when one considers the large number of physicians who have obtained their training in pathology either directly or indirectly from him. Dr. Warthin's interests were diversified. Whatever he wrote was done with a thoroughness that is not often met. His latest work (1931), The Physician of the Dance of Death, is a classic. His death removes from the University campus another of its noted scholars.

DR. JOSEPH H. HATHAWAY

Dr. Joseph H. Hathaway of Highland Park, instructor in anatomy at the University of Michigan, died in a Toronto Hospital, where he was operated upon for appendicitis on June 12. He became ill while on a visit, with his wife, to the home of her parents, at Toronto. Dr. Hathaway, who was forty-eight years old, was born in New York. He was a graduate of Harvard University. He taught in the medical school of Cornell University for several years, was an instructor at the University of Louisville, at Louisville, Ky., for four years, and was professor of anatomy at the Detroit College of Medicine for six years. He was appointed a member of the University of Michigan faculty a year ago. Dr. Hathaway had been honored by the American Medical Association for a series of brain dissections. He was a member of the American, Michigan State, and Wayne County Medical Associations and of the staff of Highland Park General Hospital. He was associated in private practice with Dr. Robert Foster, Highland Park. Dr. Hathaway leaves his wife and one son, Joseph Comstock Hathaway.

DR. FRED W. BAESLACK

Dr. Fred W. Baeslack of Detroit died at St. Joseph's Mercy Hospital of cerebral hemorrhage on June 19. Dr. Baeslack was 56 years old. He was born in Hohenstein, Germany, and came to the United States at the age of 16 years. He graduated from Amherst College in 1902 and pursued post-graduate work at Columbia, where he obtained his M.A. degree in 1905. He graduated in medicine from the University of Buffalo in 1910. Previous to engaging in practice in Detroit Dr. Baeslack was engaged in research work at Parke, Davis & Company. Dr. Baeslack was a thirty-second degree Mason and a member of the Kilwinning Lodge, Detroit. He was also a member of the Wayne County Medical Society, Michigan State Medical Society and the American Medical Association. For the past ten years he was assistant city physician in Detroit. He leaves his widow and one daughter who was graduated B.Sc. at the recent commencement at the University of Michigan.

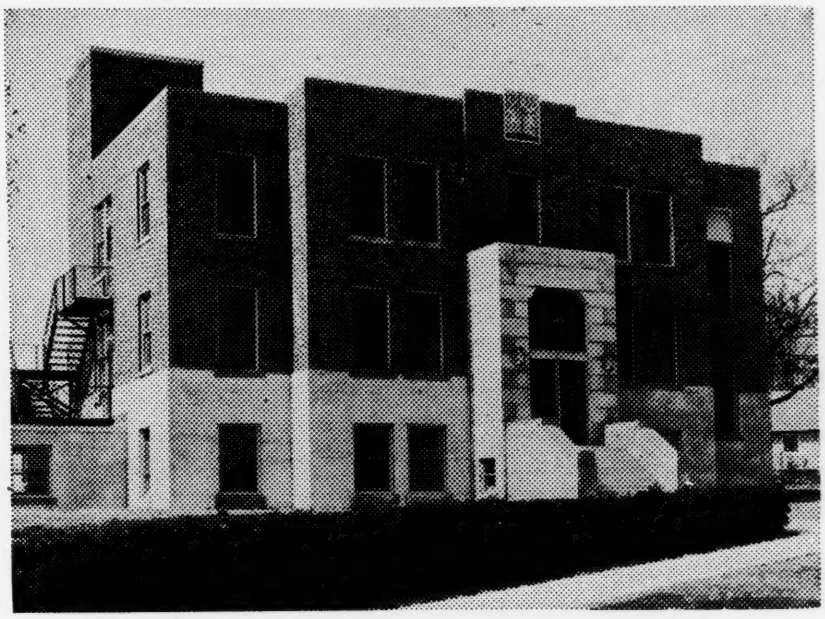
GENERAL NEWS AND ANNOUNCEMENTS

UPPER PENINSULA CHILDREN'S CLINIC

The Upper Peninsula Children's Clinic erected by the Children's Fund of Michigan, the foundation which was created by a gift of Senator James Couzens two years ago, was dedicated on June 11. Among those present who spoke at the dedication ceremonies were Governor Wilber M. Brucker, Rt. Rev. Monsignor H. A. Buchholtz, chancellor of the Catholic diocese of Marquette; William J. Norton, of Detroit, vice-president of the children's fund; Dr. Hugo A. Freund, of Detroit, president of the children's fund; Harlow A. Clark of Marquette, and

Alexander G. Ruthven, president of the University of Michigan. This new clinic will be the medical center for children for the Upper Peninsula. Post-Graduate courses in pediatrics will be given to doctors of the Upper Peninsula and children's clinics will be conducted from time to time.

The building itself is a three-story brick structure. As the illustration shows, it is devoid of unnecessary ornaments. There are thirty rooms, including an ampitheater capable of seating seventy-five persons. The clinic building was built on land belonging to and adjoining St. Luke's Hospital, to which it is connected by a brick passageway. The clinic will be used for examination purposes only. Any necessary hospitalization will be in St. Luke's Hospital. The cost of the building and power plant is $100,000.



UPPER PENINSULA CHILDREN'S CLINIC, MARQUETTE, MICHIGAN

DETROIT COLLEGE OF MEDICINE

The sixty-first annual reunion of the Detroit College of Medicine and Surgery was held on June 18 at the Hotel Statler, when about 300 alumni attended the annual dinner. Dr. C. G. Jennings of Detroit, the oldest living graduate of the College, was made honorary president. Dr. Jennings graduated with the class of 1879. The newly elected officers were: President, Dr. Clarence Eisman of the class of 1912; vice-president, Dr. Floyd Summerville of Oil City, Pa.; Secretary-Treasurer, Volney Butler. Drs. Clarence Owen and George Sewell were elected to the executive committee and Dr. Andrew P. Biddle was chosen as trustee.

The dinner was followed by a program, in which the retiring president, Dr. Clarke D. Brooks, acted as toastmaster. Edgar A. Guest, the Free Press poet, was the principal speaker. Addresses were also made by Dr. C. C. Slemons, Commissioner of Health of the State of Michigan, Dr. Burt R. Shurly of the class of 1882, Dr. Angus McLean, Dr. W. H. MacCracken, dean of the College, and Dr. J. M. Robb, president of the Wayne County Medical Society. The graduating class of the Detroit College of Medicine and Surgery was elected as members of the alumni organization. The arrangements of the meeting were in charge of Dr. B. H. Larsson.

The post-graduate courses given at Detroit by the Department of Post-Graduate Medicine of the University of Michigan have proved to be very popular. Among those who registered for the June, 1931, course are the following: Drs. C. H. Clausen, Detroit; Chas. W. Courville, Detroit; E. G. Schaiberger, Saginaw; Clarence E. Toshach, Saginaw; Arnold Strauss, Lansing; Vincent J. Turcotte, Detroit; L. L. Wittenberg, Detroit; Geo. S. Foden, Detroit; H. J. Prall, Lansing; J. J. Woods, Ypsilanti; Hazel R. Prentice, Kalamazoo; R. T. Fuller, Kalamazoo; E. H. Beernink, Grand Haven; Earl F. Lutz, Detroit; Harry Lieffers, Grand Rapids; Louis J. Bailey, Detroit; A. B. Walker, Wyandotte; M. J. Budge, Ithaca; Arthur J. Griffith, Detroit; A. M. Watson, Orion; F. W. Lee, Fairview; C. W. McColl, Wyandotte; Effie Arnold, Detroit; J. A. Miller, Detroit; W. E. Hopkins, Summit Station, Ohio; L. H. Darling, Lansing; L. Fairbanks, Luther; Neil A. Gates, Ann Arbor; Geo. D. Lowry, Department of Student Health, Ohio Wesleyan University, Delaware, Ohio; G. I. Goodrich, Dover, Ohio; H. W. Dierksheide, Painesville, Ohio; David M. Kane, Sturgis, Michigan; Viola M. Young, Detroit; Marian E. Parker, Kalamazoo; H. W. Nelles, Toledo, Ohio; Edward M. Vardon, Detroit; William S. Armour, Birmingham, Alabama; O. H. Gillette, Grand Rapids; C. P. Clark, Flint; Robert S. Drews, Detroit; W. J. Wall, Davison, Michigan; A. R. Callander, Delaware, Ohio; G. R. Beck, Detroit; Susanne M. Sanderson, Detroit; H. H. Harris, Detroit; P. H. Kennedy, Youngstown, Ohio; H. Albrecht, Detroit; J. G. Maurer, Reese, Michigan; W. O. Allen, Detroit, and Wilbur S. Powell, Dayton, Ohio.

The honorary degree of D.Sc. was conferred upon Dr. Don M. Campbell, and also the degree of D.P.H. was conferred upon Dr. C. C. Slemons, Commissioner of Health of the State of Michigan, at the annual commencement exercises in connection with the Detroit City College, which took place on Thursday, June 18.

SOCIETY ACTIVITY

MONTHLY COMMENT

The August Journal will be the Pontiac Number, preliminary to our annual meeting in Pontiac on September 22, 23, and 24. The contents of that number will cause you to want to attend that session.

* * *

Do you know the scope, work and limitations of State Clinics, County Health Units, and Foundation Activities? If not, read the discussions in this issue. Do not condemn until you know.

* * *

Each month the endeavor is made to present in this section some comment on the subject of medical economics and public relations. These topics are lively subjects of comment by national, state and county officers. Every medical publication contains something thereon. The better comments are here reprinted. The purpose is to impart to the members the trend of events as well as the opinions and attitudes of medical and lay minds. Physicians of today cannot limit their readings to scientific subjects. There is need for a broadening mind and the giving heed to medical relations to the public and the state. Indifference will lead to a rude awakening on the part of the doctor who is unconcerned.

* * *

Your council is alert and active in behalf of the profession. It is concerned with the member's welfare and future. The present group of councilors is the most active body the Society has had in ten years. You are urged to discuss conditions with the Councilor of your district.

* * *

It would be remiss were the retirement from office of Dr. J. M. Robb, President of the Wayne County Medical Society, not noted. Dr. Robb's service was noteworthy. During his term as President-Elect and President he achieved a most commendable record. Ever alert, continuously active, always on the job for 730 days and many, many nights, with but one thought—the interests of Wayne County doctors—he did much for Wayne and more for Michigan. Retiring, he leaves the Wayne County Medical Society, as the fourth outstanding medical society in the country, in a most flourishing, aggressive and active condition. We congratulate Wayne County and express appreciation for his labor, sacrifice and the spirit of service he ever reflected. Would that every medical society had such a president. Our hopes are confident that his successor, Dr. Plaggemeyer, will "carry on." He, too, merits Wayne's undivided support.

* * *

"In the final analysis, the medical profession's principal hope for coming through this uncertain period with its professional ideals unshattered, its economic status secure, its initiative and ambition for scientific advancement unimpaired, and its zeal for unselfishly serving the sick public unquenched is a militant, united, harmonious and efficient organization, commanding the undivided loyalty of all reputable physicians, promoting the cause of scientific medicine, combating methods that would reduce the profession to the status of a trade, and defending the public against the unwholesome influences of quackery and fanciful theories."—Committee on Medical Economics, of the Ohio State Medical Association, May 1, 1931.

The above statement from Ohio imparts principles that may well be made topics for discussions at county meetings. There is urgent need for such undivided loyalty in every state. The promotion of personal or limited groups interests at the expense of and with total disregard of organizational programs is surely leading the profession to a point where we will be but a trade group.

* * *

Dr. H. Wellington Yates is the President-elect of the Wayne County Society. With the pace that has been set by Dr. Robb, now taken up by Dr. Plaggemeyer, Dr. Yates will be a capable successor. Dr. Yates holds the confidence and esteem not only of the profession of Wayne but also of the entire state.

DO YOU KNOW?

Within a few years certain new activities concerned with public health have been and are now being evidenced in Michigan. From time to time we have read in the press, about the Children's Fund (Couzens), the Kellogg Foundation, County Health Units, Michigan Tuberculosis Society Clinics and other similar organizations. We have noted their activities in different parts of the state. On several occasions representatives have met with Society officers and county societies and imparted features of their work. At no time, however, have we had a definite or

concrete statement of the policies of these organizations, their objectives or their programs of work. Their activities have extended and expanded. On the whole, with a few exceptions, the profession has commended and coöperated with the work. The Society has been willing to aid.

During the past five months we have noted increasing activity as programs became farther reaching. The State Tuberculosis Society requested the State Society and the Department of Post Graduate Medicine of the University to undertake establishing diagnostic clinics. The Children's Fund requested certain joint action. County Units invited advisory committees to be appointed by County Societies. Many inquiries and some complaints were being received. We were being pressed for an answer to the question: "Where is all this leading us to?"

Your officers and council were unable to formulate a dependable answer. We did not have all the facts. We were not informed as to the plans and ultimate objectives of these movements. We were not able to determine the doctor's part.

To obtain first hand and authentic information a special meeting of the council was called by the chairman. To this special meeting representatives of these organizations were invited. They were encouraged to outline in detail the work already instituted and to impart their future programs. It was purposed to then indicate such approval or objections as the profession's interests indicated and to then endeavor to outline a plan for the future whereby the profession might coöperate and advise in this health work. That meeting was held on May 19.

The discussion is contained in this issue. It is the Council's earnest desire that every member read these statements and so obtain personal information in order that you may know.

The Council took no definite action nor did it assume any specific position. The Council instructed the Secretary to publish the discussions in the Journal; to make an abstract of the discussion and send to officers of county societies with a request for discussion and expression of attitude; to send a questionnaire to the doctors in all the counties in which these movements are established; to compile the information obtained. The Council will then formulate a report and transmit the same to the House of Delegates for final action.

Do you know? If not, read the discussion contained in this issue. Send in your comments to the Secretary in order that they may be considered by the Council. Your Council is serving you. Help it better to do so.

LEGISLATION

The legislature adjourned May 22. We purposely omit general comment upon its legislative enactments. These have been well covered by the press of the state. This comment is concerned only with some of the health and medical legislation that was considered, or, better, presented. Detailed report and comment will be forthcoming from the Legislative Committee in its report to the House of Delegates.

The Osteopathic bill, giving all rights to practice medicine and surgery to osteopaths, introduced in the Senate, died in committee.

The Osteopath bill providing for three members on the Board of Registration died in committee.

The Chiropractic bill passed the House and died in the committee of the Senate.

The bill introduced in the Senate requiring court conviction before a license could be revoked died in committee.

The bill providing that the membership of the Board of Registration be composed of ten members without regard to any school of medicine died in the House committee.

The bill making certain amendments to the present medical law, providing for annual registration and also licensing of specialists died in the committee of the House. It might have been reported out had objection been withdrawn from the Chiropractic bill. These amendments were favorably commended by many educators and editors. It is to be regretted that, because of misinformation, lack of knowledge as to existing conditions and not knowing the protection the bill accorded, many members saw fit to protest and object to its enactment. As was done in Wisconsin, so in Michigan, protest was filed by the State Homeopathic Association. Some personalities were injected even though the bill was one that emanated from the Attorney General and the Board of Registration and *not from any one individual.* Members were fearful, yet there was no need for fear, for no authority was con-

ferred on the Board which it did not already hold. It can be predicted that the next session of the legislature will enact a less desirable law, as evidenced by the resolution passed by both houses creating a lay commission charged to bring in a new bill covering all of the healing arts. The present law remains effective and the present Board can act because the Supreme Court has so ruled. It can continue to issue licenses. It can revoke licenses without first securing court convictions.

Osteopaths were given further recognition in the Crippled Children's Act, which provides that osteopaths may certify to examinations.

No funds were provided for enforcement of the medical act. Detection and prosecution of violators remain with county prosecutors and complaints will have to be sworn to by individuals. This unsatisfactory condition would have been remedied had the amendments carried.

The State Department of Health's budget was reduced. In consequence many of the splendid activities of this department will have to be curtailed and some abandoned during the next two years.

Compensation for industrial diseases was defeated.

There were a number of bills that included some medical examination or certification. At this writing there is no information as to their exact nature.

In general it may be said that we are in the same position we were in when the legislature convened. We are, however, due for new legislation. Its nature will be determined by a lay commission composed of three Senators and four Representatives.

It was a session characterized by much milling about and short sighted individualistic activity on the part of individual members and doctors. It evidenced strongly how lack of unity always spells defeat. Senator Upjohn deserves every praise and laudation. It was Dr. Upjohn, oftentimes alone, who bore the brunt and obstructed cult legislation. The profession is deeply indebted to him. Our grateful thanks is tendered to him for his labor in our behalf.

* * *

EXCERPT FROM JOURNAL OF THE HOUSE OF REPRESENTATIVES, MAY 20, 1931

Mr. Culver offered the following concurrent resolution:
House Concurrent Resolution No. 49.
A concurrent resolution providing for the appointment of a joint legislative commission to draft legislation covering the proper examination and licensing of the various branches of the Healing Art in the State of Michigan.

WHEREAS, The antipathy and rivalry of the various schools and methods practicing the Healing Art in the State of Michigan has reached a point where the representatives of the various schools seems to be unable to arrive at a definite solution of their problems through the regular channels of legislation; and

WHEREAS, The present State Board of Registration of Medicine is admitted to be illegally constituted, owing to the fact that the requirements of the present law in regard to the personnel of said Board have not been complied with for a number of years; and

WHEREAS, Entirely definite and different problems exist in regard to the various schools of Medicine and methods of practicing the Healing Art; therefore be it

RESOLVED by the House of Representatives (the Senate concurring), That a special commission, consisting of four members of the House of Representatives, to be appointed by the Speaker, and the members of the Senate, to be appointed by the President, be known as a special legislative committee on the Study and Adjustment of present and proposed Laws concerning the Practice of the Healing Art. Members of said Commission shall serve entirely without compensation or without expense to the State of Michigan for the purpose of preparing and submitting a plan and accompanying legislation to the next regular or special session of the Legislature; and be it further

RESOLVED, That such Commission be appointed to perform its duties without expense to the State of Michigan.

Pending the reference of the resolution to a committee,
Mr. Culver moved that the rules be suspended and that the resolution be considered at this time.
The motion prevailed.
The question then being on the adoption of the resolution.
Mr. Culver demanded the yeas and nays.
The demand was seconded.
The resolution was then adopted, a majority of all the members present voting therefor, by yeas and nays, as follows:
Yeas, 90.
Nays, 0.

EXCERPT FROM JOURNAL OF THE SENATE, MAY 20, 1931

Referring to House Concurrent Resolution No. 49

The message informed the Senate that the House of Representatives had adopted the concurrent resolution; in which action the concurrence of the Senate was requested.
Pursuant to rule 59, the concurrent resolution was referred to the Committee on Rules and Resolutions.

EXCERPT FROM JOURNAL OF THE SENATE, MAY 22, 1931

Mr. Horton submitted the following report:
The Committee on Rules and Resolutions respectively reports back to the Senate the following entitled concurrent resolution, without amendment, and with the recommendation that the concurrent resolution be adopted:
House concurrent resolution No. 49.
A concurrent resolution providing for the appointment of a joint legislative commission to draft legislation covering the proper examination and licensing of the various branches of the Healing Art in the State of Michigan.

N. B. HORTON,
Chairman.

The report was accepted.
The concurrent resolution was considered and adopted.
Committee members named—Upjohn, Conlon, Lawson, Culver, Southworth, Darin, Jeffries.

A. M. A. PHILADELPHIA SESSION.

The Philadelphia annual session of the American Medical Association was characterized by being just one more annual meeting of the greatest medical organization in the world. And when we say one more annual meeting we intend that to mean the best annual medical meeting in the country, for such is the standard that has been established by this national body. Philadelphia with its history, its medical colleges and hospitals, its medical men and its new auditorium proved to be a most pleasing environment for this year's session. The new civic

auditorium, barely completed, was inaugurated by this annual meeting. It was ample to house all the sections, exhibits, scientific exhibits and registration under one roof in a most comfortable manner. It is a beautiful, well ventilated building of which Philadelphia may be proud.

The House of Delegates completed its work in four sessions. Our members are referred to the *Journal of the A. M. A.* for the annual reports, of officers, trustees, councils and bureaus which reflect the year's achievements and that which the Association is accomplishing for the profession, scientific medicine and for the people. As was reported, the Association now has over 102,000 members.

No new activities were undertaken other than to extend the work of the National Legislative Committee and that of the Bureau of Medical Economics. The Council on Medical Education and Hospitals was directed to formulate the standards and qualifications that are deemed essential and which a doctor should meet ere he be considered qualified for recognition in the special fields of medicine. This was in a measure an endorsement of the proposed amendment to the Michigan medical practice act which sought to authorize the issuance of certificates to those who met a common standard for any medical specialty. It was recognized that the time is at hand for the setting of some such standard and certification and to terminate non-qualified individuals posing as specialists when they are deficient in specialist training. Several of the sections made similar recommendations to the House and endorsed the resolution introduced by Dr. Moll. The resolution introduced by Dr. Brook relative to fees for filling out insurance certificates was referred to the Bureau of Economics for investigation and report at the next annual meeting. The resolution introduced by Dr. Moll proclaiming that the American Medical Association stands and speaks for the profession in national medical affairs, the State Society in state affairs and the County Society in county affairs was unanimously adopted.

Michigan was represented by Drs. Brook, Moll, Gorsline and Luce. Dr. Shurley represented the section on oto-laryngology. When Michigan's fifth delegate failed to appear at the second session, Dr. A. W. Hornbogen, the alternate, was seated. Previous to this, at the first session, by reason of his years of service, the New York delegation moved that Dr. Hornbogen be accorded the privilege of the floor during the session. This is the first time that the House accorded such recognition and honor to any individual.

The scientific program was a most splendid one. The scientific exhibit was the largest and finest ever sponsored. We were pleased to note several splendid Michigan scientific exhibits. At the General Session, Dr. E. S. Judd was inducted into office and delivered a presidential address that dealt with pending medical problems.

At the last session of the House, Dr E. H. Cary of Dallas, Texas, was elected President-elect, Dr. West was re-elected Secretary, Dr. Austin Hayden re-elected Treasurer, Dr. F. C. Warnshuis, re-elected Speaker, Dr. A. E. Bulson, re-elected Vice-Speaker. New Orleans was selected as the city for the holding of the 1932 session.

This brief memorandum is not intended as a complete report of the annual meeting. It is intended to serve first as a notice to urge our members to turn to the *Journal of the A. M. A.* and read all the reports and details of the session and secondly to urge a compliance and observance of the policies and recommendations of the several Councils and Bureaus. A supplemental report will be made in greater detail by our Delegates at the Pontiac meeting.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION, ANN ARBOR, JUNE 1, 1931

Present: President Ruthven, Chairman; Drs. Jackson, Huber, A. C. Thompson of Detroit, Rickert, Sundwall, Soller, Dempster, Lyons, Shackleton, Fisher, Henderson: Mr. A. W. Thompson of the State Department of Public Instruction, Miss Marjorie Delavan of the State Department of Health, Miss Olive Sewell of the Michigan State Nurses Association, and Mrs. B. Fletcher of the American Red Cross.

1. Minutes of the meeting held in Ann Arbor on January 22, 1931, were read and approved.

2. Report on Essay and Poster Contests. Dr. C. A. Fisher, Assistant Director of the Extension Division, reported that during the past year fewer high schools had taken part in this contest than during the previous year. It was suggested that this was due mainly to the fact that the majority of our public schools are at present overburdened with contests of various sorts. It was pointed out, also, that the Gorgas Memorial Fund is conducting an essay contest on health. At the conclusion of Dr. Fisher's report, the Secretary recommended that the contest program be discontinued for the present, the funds appropriated for this work to be used in carrying out the three-year educational program as described later.

3. Field work. Dr. Soller gave a report of the

field work during the past year, including a detailed account of the trip which he made recently to the schools in the northern part of the southern peninsula. On this trip he visited twenty-two schools. Of the twenty-two schools visited, twenty-one accepted without question the proposed health program for next year. Twenty of the twenty-one schools for which health education programs were arranged, expressed a desire to have the health program put on in coöperation with the State Health Course of Study.

4. Treasurer's report. Report of the Treasurer, Dr. Warnshuis of Grand Rapids, was read by Mr. Henderson. The following is a summary of the receipts and expenditures: Receipts, $4,096.85; expenditures, $1,776.93; balance on hand June 1, 1931, $2,319.92. The report as given in detail was accepted and placed on file.

5. Publicity Committee. Dr. Bruce, Chairman of the Publicity Committee, was unable to be present on account of illness. His report was read by Dr. Jackson.

6. The proposed three-year health education program. The President now called upon Dr. Henderson to give an outline of the proposed three-year health education plan. The salient features of this report were as follows: The Joint Committee on Public Health Education was organized in 1921. Its purpose, as stated in the slogan which appears on all publications, was "to present to the public the fundamental facts of modern scientific medicine for the purpose of building up sound public opinion relative to the questions of public and private health. It is concerned in bringing the truth to the people, not in supporting any school, sect, or theory of medical practice. It will send out teachers, not advocates." During the past ten years the activities of the Committee may be divided into two distinct stages. The first four years, that is, from 1921 to 1925, may be characterized as the organization stage. The second phase, from 1925 to 1931, was a period of experimentation, based largely upon the trial and error method. It is the opinion of the Secretary that the time has now arrived when we should engage in a more definite educational work, and to this end he proposed a tentative three-year educational program which includes the following distinctive features:

First, the educational work, including the organization of health programs for high schools and Parent-Teacher Associations, and such other administrative duties as may be associated with the program, is to be under the direction of Dr. C. A. Fisher. Dr. Fisher's acquaintanceship with the schools and the schoolmen of the State, and the fact also that he is Chairman of the Parent Education Committee of the State Parent-Teacher Association, fit him especially well for this administrative work.

Second, Dr. Soller will be assigned the field work which is to include personal contacts with local medical societies, the organization of courses, and the giving of lectures in connection with assignments made by Dr. Fisher.

Third, that phase of the work which has to do with the selection of a staff of lecturers will be in direct charge of Dr. Henderson. The task to which he proposes to direct his attention is to increase the number of speakers and to organize the same, both with reference to geographical distribution and speaking efficiency.

Fourth, this phase of the proposed program has to do with the preparation of a Lecture Outlines Library. This will include the preparation of lecture outlines mainly in the form of synopses of important subjects for presentation in connection with Parent-Teacher Association programs, and especially in connection with the State Health Course of Study program. The work is to be under the direction of the Outlines Committee, of which the Secretary is an ex-officio member. It is planned to have the Committee select some person, or persons, to assemble and arrange the material for the various outlines, after which the Outlines Committee will determine upon the final form of the material. In order to carry out this proposed plan for the building up of a Lecture Outlines Library, it was pointed out that certain funds would be necessary. It was suggested by the Secretary that the funds which heretofore have been allocated for carrying on the contest program, together with an additional sum sufficient to bring the amount to $500.00, be made available for the preparation and publication of outlines.

At this point Dr. Jackson read the following excerpt from a letter from Dr. Bruce, Chairman of the Outlines Committee: "I am much interested in your proposed three-year Health Education Program which involves an expenditure of about $500.00 annually for this period. The building up of a Lecture Outlines Library seems so necessary to the success of our lecture program that I am unqualifiedly favorable to it. As to the sources of the necessary funds for the undertaking, I suggest that the amount stated might be withdrawn from the Publicity Fund. I feel quite safe in recommending this for the first year at least, and do not believe it either advisable or necessary to call for further contributions from our group. Through the adding of twelve or fifteen lecture outlines a year, besides those now being done, you will soon develop resources which will be much appreciated by the doctors of the State who are so frequently called upon for addresses upon subjects with which they are unfamiliar."

After a brief discussion of the proposed three-year program, it was moved by Dr. Jackson and seconded by Dr. Shackleton that the program as outlined by the Secretary be approved and that $500.00 of the funds of the Joint Committee be allocated for this work.

7. Upon motion of Dr. Sundwall, it was voted to ask the Children's Fund of Michigan and the Kellogg Foundation to become members of the Joint Committee through officially appointed representatives.

8. It was moved that the next meeting of the Joint Committee be held in conjunction with the Medical Council.

9. The meeting adjourned.

W. D. HENDERSON, *Secretary.*

USE OF SPINAL ANESTHESIA IN UROLOGY

ARTHUR L. CHUTE, Boston (*Journal A. M. A.*, Jan. 10, 1931), never uses spinal anesthesia for kidney operations, but confines his use of it to operations on the lower part of the urinary tract. He says that there are a few contraindications to the use of spinal anesthesia. A very nervous or mentally unstable patient or one who is strongly prejudiced against its use rarely does well under it. He rarely uses spinal anesthesia in young persons. Besides the 840 times that he has made use of spinal anesthesia in prostatectomies he has made use of it many times for other operations on the lower urinary tract, such, for instance, as operations on bladder tumors, crushing stones, painful cystoscopies, fulgurations, closing suprapubic fistulas, as well as in a considerable number of urethrotomies, both internal and external, and in a few cases of urinary extravasation. Few complications were encountered.

REPORT OF PROCEEDINGS OF SPECIAL MEETING OF COUNCIL OF MICHIGAN MEDICAL SOCIETY, AND INVITED GUESTS, HELD AT THE HOTEL STATLER, DETROIT, MICHIGAN, TUESDAY MAY 19, 1931

The meeting was called to order at 1:30 o'clock P. M.

Dr. Corbus (Chairman): Gentlemen of the Council, and invited guests:

In the opinion of your chairman and the Executive Committee, there are certain matters presenting themselves of such importance as to justify calling of this special meeting of the Council. These matters are inter-related in that they concern various activities which are directed towards the improvement of the health and social conditions of the people of the state, activities in which we doctors are vitally interested, and necessitate a decision on our part as to what our official attitude in regard to them shall be.

As a foundation for a discussion it is important that we have a fuller knowledge of these activities as they exist today, and, so far as may be obtainable, the future plans and objectives. We are privileged to have with us the heads of several of the organizations that are behind these activities. I trust you will pardon a word or two of introduction before I call on these guests.

The end of the first hundred years of the Michigan State Medical Society came some little time before the war. During this period its activities were quite self centered. They were directed towards better fellowship, ironing out local differences, of which there were many, scientific improvement such as might be obtained by the reading of papers, and the discussion of cases in get-together meetings. All in all the activities were quite largely for the benefit of the individuals composing the society.

With the ending of the first hundred years of the society, we, for the first time as an organization, engaged in an activity which indicated that we felt that we had a true obligation to the community. This first activity was promoted by Dr. Victor Vaughan, who induced the Society to combine with other agencies to make a survey of the cases of tuberculosis in the state—the first social work, so far as I know, that had been undertaken. Since this time, and most particularly in the last eight or ten years, the Society has become more and more conscious that it has a distinct obligation to the public to do its part in what may be termed "social work." Particularly did we feel that we had a duty to the public to instruct them along both public health and personal health subjects.

A connection with the University and its Extension Department enabled us to meet a considerable number of the laity in groups. From this beginning came the Joint Committee on Public Health and Education.

Some years ago we made a survey of maternal mortality of the state, not an exhaustive survey, but enough to show that there was a great weakness in the satisfactory practice of obstetrics, and great need for instruction of the doctor himself. This survey intensified the feeling on the part of your officers and this council that there was great need for post-graduate work. It became very evident that the doctor who had come out of school reasonably well trained, frequently grew but little in professional ability, except as he learned from experience, and so we started, as you know, the Post-Graduate Clinics throughout the state, later to be combined with the Post-Graduate Department of the University, the establishment of which was, to no small extent, due to this Society.

With the help that we have obtained from the Couzens Foundation, we cover the state quite thoroughly today, bringing new things in medicine, and old things too, to the doctor in his home, hoping that we can bring him something that is worth while, and also hoping that we may stimulate him to go further.

Conditions are changing rapidly, and a situation which is interesting to students of social welfare throughout the country, is the availability of money set aside by philanthropic individuals for the improvement of the health of the public through definite health and educational activities. The activities of these splendid philanthropies are directed, in most instances, through Foundations, of which there are several in Michigan.

The executive committee of the council

feel that it is equally important to the profession of Michigan and to the Foundations, that there shall be coöperation and a degree of affiliation between them. What that affiliation shall be will depend, of course, on the opportunities that are given us by these Foundations and your attitude towards them. Certain it is that the Michigan State Medical Society is anxious to do its part in the improvement of the health of the people of this state. We are quite willing to make sacrifices to the cause, but the occasion should come as the result of intelligent study and should be justified by results. Among the profession there are those who have a certain concern about some of these activities. I fancy that a large part of this concern is due to a lack of knowledge of the purposes and the program of those directing them.

Not always has the profession been as helpful in the activities of the Department of Health of the State as might be desired. This is much less true today than it was some years ago. Here again it is important that there be a close interlocking of activities, and since in very recent years there have been some very marked changes in the procedure of reaching the people through the Department of Health—and I particularly refer now to the "County Units"—it is well that the plans of the Department of Health which are now in existence and which are proposed, be presented to us that we may know more about them, because, after all, as I said before, it is by close cooperation that we are going to give the most in health to the people of the state.

There will be also a discussion during the afternoon, in regard to the plans of the Anti-Tuberculosis Society to utilize the Post-Graduate Department of the University and the State Medical Society, in their clinical work. I might say, in reference to this particularly, that as a council our great ambition has been to educate the doctor, to make better doctors. We believe that in anti-tuberculosis work, and this might well be said of all medical work, there is no plan of education of the laity equal to the instruction that they can obtain from their home doctor. We believe, too, that the help that we can give to make the doctor efficient in the diagnosing and handling of his case is, perhaps, the greatest work that we can do.

To these guests of ours let me say that we are here because we want to know more of what is going on now. We want to know something of the plans for the future. We want to know how we can best coöperate with you with the common aim to bring better health and better social conditions to the people of this state.

DEPARTMENT OF HEALTH

Dr. Corbus (Chairman): Certain new activities of the Department of Health have been developed in the last few years, and I am now asking Dr. Slemons to tell us about them. Dr. Slemons.

ADDRESS BY DR. C. C. SLEMONS

STATE DEPARTMENT OF HEALTH
LANSING, MICHIGAN

Mr. Chairman, and members of the Council, and friends:

I wish to state at the onset that it is a pleasure to be with you this afternoon. The Michigan Department of Health, as you know, has been one of the outstanding state departments for a great many years. In fact, it was one of the first ones organized. As you know, I have represented this department for only a comparatively few months, and the work that is being done at the present time is work started by my predecessors in office. As far as I know, there has been no change in the policies or in the activities during the past year.

Your chairman, in introducing me, stated that I would discuss some of the new developments. I am very briefly going to take you over the entire activities of the Department. Do not get frightened, because I am not going to detain you very long. The public health story at the longest is a short one. With your permission, I shall briefly outline the activities of the Department and, following your chairman's letter to me, I will devote perhaps the longest part of what I have to say to you to the county health departments in Michigan.

First, I want to take you very briefly over the history of the Michigan Department of Health. It was first organized April 12, 1873. The members of the first board were Homer O. Hitchcock of Kalamazoo; Robert C. Kedzie of Lansing; Herman F. Lyster of Detroit; Zenas E. Bliss of Grand Rapids; Reverend Charles H. Brigham of Ann Arbor; and Reverend John S. Goodman of Saginaw.

In 1887 the first bulletin on typhoid fever

was published. In 1894 tuberculosis was made reportable. In 1907 the laboratory was established. In 1913 the first sanitary engineer was appointed, and supervision of water supplies and sewerage systems authorized by legislative enactment. In that connection, I wish to say to you that there has just passed the Legislature a bill whereby the plans for sewage disposal plants and waterworks will be presented to our engineering department before the same are installed. The present law, since the first enactment, brought these plans to us after many serious mistakes had been made throughout the state. We have been able to get through the present Legislature a bill whereby the plans are submitted to our engineering department before the work is started in the various communities, so that it will save a lot of expense and a lot of trouble to these communities throughout the state.

In 1915 a branch laboratory was established in the Upper Peninsula. In 1915 the Legislature appropriated $100,000 for a tuberculosis survey. In 1919 the State Board of Health was reorganized by act of Legislature. The State Department of Health, under the commissioner and advisory council, was established. Laboratory activities were reorganized and placed under the Bureau of Laboratories.

In 1919 intensive work in venereal disease control was instituted upon request of the Federal Government. In 1921 the Bureau of Venereal Diseases was abolished, and the reporting, law enforcement and clinical supervision was placed under the bureau of communicable diseases, and the educational activities enlarged to include all communicable diseases, and placed under the bureau of education.

In 1920 the Bureau of Child Hygiene and public health nursing was established. Provisions of the Sheppard-Towner act were accepted by Governor Groesbeck in 1922.

In 1921 the vital statistics records were transferred from the Secretary of State to the State Commissioner of Health.

In 1921 the State Commissioner of Health was authorized to purchase and manufacture biologics for the prevention and control of diphtheria.

In 1924 intensive field work in communicable disease control was placed under the bureau of epidemiology, and communicable disease records under the bureau of records and statistics.

In 1925 a branch laboratory was established in Grand Rapids. In 1925 the Bureau of mouth hygiene was organized.

In 1927 the bureau of industrial hygiene was organized; also the establishment of county health departments was authorized by the Legislature. The same year, the manufacture of biologics for control of all communicable diseases was authorized.

Your State Department of Health consists of the public health council, consisting of men with whom you are all acquainted: Dr. Hirschman of Detroit; Dr. Chalmers Lyons of Ann Arbor; Dr. Curry of Flint; Dr. Brucker of Lansing; Dr. Harkness of Houghton. You are familiar with the organization.

The Chairman, in his opening address, spoke about the plans and so on for county health departments. I wish to state at this time that plans for health activities are practically the same wherever they may be found. In your large cities, your smaller cities, your counties and your districts, the problem is the same. It is not different in one place than another, except that the more people you have, the more complicated the process. In other words, a human being is a human being, whether he is in Detroit, or up in Roscommon County. It doesn't make any difference, and he is entitled to the same protection. Your health program, wherever it is found, is along the same line. I believe what it does depends very largely upon the man you place in charge.

The objective of all health department practice is the control of preventable diseases and the securing of health for all the people. The first necessity to obtain this objective is full-time health service with adequate trained personnel for every community. I want to repeat that: The first necessity to obtain this objective is full-time health service with adequate trained personnel for every community. This organization will accomplish a reduction of maternal mortality, making motherhood safe in the United States; it will secure normal growth of body and mind for children; it will promote the health of adults; it will give an adequate supply of safe milk for every community; it will give an adequate supply of pure water for every community; and, lastly, it will give us the elimination of tubercu-

losis, typhoid fever, diphtheria and smallpox, because these communicable diseases should be eliminated with our present knowledge.

The Michigan Department of Health consists of 10 bureaus, 180 employees, and has a budget of approximately $500,000 per year. We do not control in any way our activities, the amount of work done. In other words, in most of our bureaus we have to do the work that is sent to us. For instance, we have the bureau of vital statistics. They have to take care of the work that is sent to them. We have our laboratories; and we do the work that is sent to us from the physicians of Michigan; we have our biologic plant, and we send out the material that the medical profession of Michigan asks for. And the engineering department, the same way. In other words, we do not control the amount of work that we have to do; that is in other hands. We do the work we are requested to do by the physicians of Michigan.

Our bureau of laboratories and biologics spends approximately one-half of our entire appropriation. It may be of interest to you to know that there are only eleven biologic plants in North America; there is one in Canada, one in Mexico, and nine in the United States. Of these nine in the United States, six are commercial, and three are state health department plants in the following states: Massachusetts, New York and Michigan. Not all of those commercial plants manufacture a full line of biologics. During the year 1930 our biologics plant sent out (and distributed) to the physicians of Michigan over $210,000 worth of biologics; it would have cost $210,000 at our lowest contract price. In other words, if we had gone out in the open market and bought these at the lowest contract price, it would have cost us over $210,000. If purchased by you people, by the doctors of Michigan, at the regular retail price, it would have cost over $1,000,000. I might state in passing that a package of diphtheria antitoxin that costs $10 in the retail drug-store, we manufacture for 87 cents.

Last year in our laboratories, we examined over 300,000 specimens.

In the Bureau of Records and Statistics, we took care of the records of over 100,000 births, 50,000 deaths, 30,000 marriages and 10,000 divorces.

There is the Bureau of Engineering, as I stated a moment ago, and their work is largely consultation and having to do with sewage disposal plants and municipal water supplies.

Another bureau is that of child hygiene and public health nursing. This was the bureau that carried on the maternal mortality survey that was made two or three years ago, with which all of you physicians are familiar. I think the workings of this bureau are known to all of you. Then, there is the bureau of epidemiology which has to do with the control of communicable diseases. The bureau of education is the bureau which gives out our material for the state. The bureau of mouth hygiene is in charge of Dr. Davis, and you are familiar with that. The bureau of industrial hygiene has been added to the list. Then we have the bureau of embalming. We also furnish in part an investigating officer for the State Medical Society, our Mr. Potter acting in the capacity of a police detective, and so on, arranging for prosecutions and so forth.

The department also arranges for speakers for medical meetings, especially on the post-graduate courses that are being held throughout the state; and the department has for several years been furnishing material for the State Journal.

The last bureau, and the most recent bureau, and the one that has had the greatest activity, is the bureau of rural hygiene. That is the bureau that has charge of organizing the county health departments. And, I judge that is one of the questions that you wish discussed rather fully here this afternoon. And we can discuss it fully, and do it quickly, because there is not very much to say about it, after all. I have brought this map. I have used it before. I brought it down, in order that you might have an exact idea of how much of the area of Michigan is today under what I call very good health department practice.

I stated to you at the start that one of the essentials for this organization is a competent personnel. Now, this area represents the area of four districts, sixteen counties that are in charge of the Children's Fund of Michigan. (Indicating on map.) These counties represent the counties that are supporting themselves with the aid of state subsidy and the help of the Rockefeller Foundation and the United States Public Health

Service. These two counties, Barry and Ontonagon, have been recently organized, but the work at the present time has not been started. Barry County starts the first of June, and I do not know the date that Ontonagon County will begin operations.

Oakland County, Genesee, Saginaw, Midland and Wexford were organized up to a year ago. Since last summer we have organized Isabella, Kent, Ottawa, Barry and Ontonagon.

The sad part of this situation to me is that there will be no further increase in this work during the next two years, for the reason that the Legislature refused to give the additional money we asked for. They gave us $30,000, and that is a $10,000 increase over two years ago. But, if you will notice, we have the ten counties taken care of right now. So that, for the next two-year period there will be no opportunity for further development of rural health work.

I wish to read to you the law, and it is very brief, governing the formation of county health units in Michigan.

"Section 1. The Board of Supervisors of any county in the state may provide for a county health department to be paid for out of the general funds of the county.

"Section 2. The plan of organization shall be approved by the State Health Commissioner.

"Section 3. The Health Commissioner shall be selected by the Board of Supervisors.

"Section 4. A health officer may be removed for incompetence, or misfeasance of office by the Board of Supervisors, or by the State Health Commissioner, after due hearing.

"Section 5. The county health department shall have jurisdiction throughout the county, except in cities having an organized health department with full time health officer, except that such cities may elect to join with the county in the organization.

"Section 6. The county health department shall have the administration of all health laws and the control of communicable diseases under the advice and direction of the State Department of Health."

Section 7 deals with how two or more counties may be joined together. I will not read that. That is merely mechanical. You can have two counties, or three counties, or four. By each county having a representative, they meet, and the organization in the end will be the same as the single county.

"Section 8. All claims against the district health department shall be audited by the district health board," etc.

"Section 9. Act No. 130 of the public acts of 1917, and all overt acts or parts of acts in conflict herewith are hereby repealed.

"Section 8-2. When approved by the State Health Commissioner, the State Auditor-General shall refund to the county maintaining a county health department, either singly or united with other counties, not to exceed 25 per cent of the cost of maintenance of such department, payments to be made quarterly: Provided, that said refund shall not exceed $3,000 per annum for any such county or health district. The State Treasurer shall act as disbursing agent for the Michigan Department of Health in disbursing all other funds received by said Michigan Department of Health for such county or district health service."

One of the difficult things we have had to meet in the organization of county health departments has been proper personnel for the conducting of these county health departments. You know that public health work is comparatively a new field, and the success of any of these units depends entirely upon the men and women you get to put in those fields. If you have a good health officer, you need have no fear regarding the success of any of these units. A poor health officer, by the same token, will give us a failure just as rapidly and just as quickly. It is not only true in Michigan, but it has been true throughout the United States, that the serious question has been a properly trained personnel for these activities. In order to obviate this, and in order to meet this need, some two years ago Dr. Kiefer and the Rockefeller people conceived the idea of starting a training school in Lansing, the purpose being to take people interested in public health work and give them a very intensive course, that they might at least know the objectives and the plans of a county health unit. We have been very fortunate in the type of man that the Rockefeller people have sent us. He has been conducting, with the help of the various bureau heads of our department, a three months' training course for doctors and for nurses. The Rockefeller people have sub-

sidized this man; they pay him $1,500; our department pays him $4,500 a year; and they have subsidized the people taking this course; every doctor going there gets $5 a day, and the nurse gets $3 a day. These people have been given a three months' intensive training, to get them at least acquainted with the requirements and methods of what is considered good public health procedure.

I am sorry to state that unless we get reinforcements from some place, this school must be discontinued, because we haven't any place to put the additional people. We are working in two or three places now to see if we can get a little additional money for the next two years. The law reads like this, and it is just exactly like the tuberculosis law: "The Auditor General shall pay to these counties a sum up to $3,000 a year." We could go on and organize other counties in the state, providing they are willing to wait two years for their money. But, with the present financial conditions, and the feeling among the boards of supervisors, unless they can get their fingers on this money to start with, I have very faint hopes of seeing any additional units organized for the next two years. However, if a county wishes to go ahead and organize, they would be entitled to that money through a deficiency appropriation, the same as the present State Legislature did appropriate $1,250,000 to make up the difference of the last appropriation, the amount that is due the various county and city sanitaria in Michigan.

In this training school only procedures are recommended. Methods have not been stressed. You can all readily recognize that methods that might be applicable in one county or one place would not be proper in another. The things that you can do in Flint, you could not possibly do in Lansing; and things that you can do in Lansing, you cannot do the same way in Kalamazoo, and so forth. That is true in the various counties throughout the State. The training school has emphasized and urged certain procedures, but does not specify methods, because we leave the question of methods up to them, after the unit has been organized, and the local situation appraised.

I do not think methods should be taught because, as I stated before, what you can do in one place you cannot do in another.

Before attempting to organize a county health department in any particular county we must have had an invitation to do so from the county medical society. After the board of supervisors has voted to establish a county health department and is looking for personnel it has been our policy not to interfere with the local county organization having this in charge. We do not say to Isabella County or to Midland County, "You take this man or that man." Personally, I think it is a very poor policy because, if we recommend a failure, it would be up to us. We put it up to the counties themselves to hire their own men. We may send half a dozen men to be interviewed but it is up to the county to choose its own man. In passing, I wish to say that the greater interest you can get your county to take in the local unit the better it is going over.

I wish to illustrate how effectively these county health units have been selling themselves: In one of our counties they made a very unfortunate selection of a county health officer.

Late last summer, rumors began to come into the office that things were not running well. Investigation proved, that things in that county were in a bad way. Being new on the job, I said to myself, "There goes a county." Well, very much to our surprise that fellow's work in the first six months that he had been there had been of such quality that he had absolutely sold the idea to the Board of Supervisors, and the people of the County, even though he himself had proved to be a failure, were willing to shove him out and take on a new man, in order that the work might go on. To me, it was a very notable example, and it has given me a lot of encouragement for this type of work. Although that man was a failure in the end, still, the work that he had done in the first few months had sold itself to the county, and they were willing to go on with the work, in the face of what would seem to me to be a most discouraging start. As far as I know, each of these counties has a medical committee. The report I get from the county health officer is this, that the county health committees do not function. Committees are called together, and they do not come. I can readily understand that, because they are like most committees; it is very hard work to get a quorum. I happen to belong to several of these committees, and

I travel a good many miles, to find out when I get there that we do not have a quorum, and the only thing we can do is to have a meal and go home. As far as I know, in every county in Michigan where health departments are in operation, they have a committtee from the County Medical Society to work with.

Before closing, I wish to say that up to the present time we have not O.K.'d a county unit that showed a budget of less than $12,000. We have figured out that the minimum budget that the sparsely settled counties can get along with is at least $12,000, which gives them a county health officer, a couple of nurses, and nurses' expense, and in some instances a sanitary officer. Of that $12,000, the State has paid $3,000. The first year, the Rockefeller people give them $2,500, the second year $1,500, and the third year $750. The fourth year they drop out of the picture. Up to the present time we have had $5,000 a year from the United States Public Health Service that we have been able to distribute among the counties of the State.

Take Oakland County, they have a very large budget; Kent County has a budget considerably larger than the minimum; Wexford has a budget larger than the minimum. We expect a lot from Barry County. It looks to me,—I am not authorized to say this, and Dr. Pritchard has never told me so, but in the end, I thoroughly believe that Barry County will give us a super-county health department and the finest demonstration that has been given in the United States of what a good county health organization will do.

In closing, I wish to say this, that during the time I have been in the office in Lansing I have not had a single complaint from the medical profession as to the operation of any of these county health units.

I will be glad to answer any questions that you might have, in any way, in regard to the operation of this department.

Dr. Corbus (Chairman): I hope we can have a very free discussion of these things. There may be certain questions in your minds, as I have heard them expressed from time to time, which you would like to have the Health Commissioner answer. The best of all of these talks is the fact that we ourselves become educated. We get closer to a knowledge of what is going on

Dr. Slemons (State Health Commissioner): I will answer that question, if you wish.

Dr. Powers (Saginaw, Mich.): In Saginaw, a large percentage of the work is very satisfactory to the County Medical Society. I think the place where Saginaw falls down is in details, which should be correctible. One of the biggest causes of it amongst the doctors is the assigning to the county unit of the privilege or duty of O. K.'ing the bills that the doctors have for taking care of indigents in the county. I recognize that is a detail, but I think perhaps some of these details are at least worth while mentioning. Secondly, there has been in the past some friction between the county health units and the City Health Department. We have in Saginaw a full time health officer. I would like to ask Dr. Slemons, where those conditions occur, if it is not the understanding that the city functions as a unit in the health matter, and that the County Health Department does not have control of the City health matters, in those cities where they have a full time health department. And the third thing that has crept in, that creates some dissension, is the fact that the so-called Advisory Committee that is supposed to be from our Medical Society, was appointed by the Director of the health unit in Saginaw County, and was appointed apparently for political reasons, using men who live in outlying districts in the county, and only one or two men from the City of Saginaw, which has about 80 per cent of the doctors of the county.

Now, I recognize that all of these things I am bringing up are details in the operation of the thing, and are not a direct criticism of the system as a system. But, these things do creep in. And if we could have a Committee appointed by the Medical Society to act in supervisory capacity of a county health officer, I think it would do away with a certain amount of friction.

Another detail that causes some friction is the ambition of the nurses in diagnosing and making recommendations, which causes friction. Now, that, again, is a detail. But I know that we do get quite considerable friction over that.

And, lastly, the thing that causes friction is the freedom that the health unit uses in sending patients to Ann Arbor, without getting the doctor's opinion on the case until all of the arrangements are practically complete, and then some doctor who thinks it is an easy way to make $5.00 goes up and signs an order on Ann Arbor, so that certain very simple things such as the removal of tonsils and so forth have been known to be sent to Ann Arbor. That is nothing against the usefulness of Ann Arbor, but it does cause friction in our local society.

Dr. Corbus (Chairman): In the past fifteen years, no less than in the one hundred years preceding, the doctor shows evidence of being an individualist. Much of the difficulty, much of the friction, comes from that attitude of individualism on the one part, and ignorance on the other, and certain tactlessness perhaps of individuals who are operating these various systems. Perhaps the greatest number of criticisms which come to us, which come to the Secretary's office, when searched out to their source, and where they are true at all, come from an over-activity, you might call it, and over-enthusiasm and lack of tact on the part of the nurse. And, I presume that goes back to Dr. Slemons' statement that, after all, the success of these things is very much dependent upon the personnel. It is dependent also upon the control of those individuals who are employes and who are not medical men.

Will you now answer the questions, Dr. Slemons?

Dr. Slemons: Yes.

Dr. Corbus (Chairman): Perhaps you might also mention about the social worker and the visiting nurse.

Dr. Slemons: I intended to say, when I was on my feet the first time, that in order for a county to enjoy the subsidies spoken of, there are certain things we insist upon in their personnel. And one

county last Fall chose to do otherwise. Up to the present time, they have not had a nickel, and won't get it until they meet our requirements. There has been no argument back and forth. If a county wants to have our help, there are certain things they must do. Forty counties could organize this afternoon, and organize as they please, and we would have no supervision over them because it would be purely a local matter. But where they want our help, there are certain requirements they have to meet.

The Doctor said, "Where do we get people to take these courses?" Perhaps it is surprising to you gentlemen to know the number of available people, and I would say, the number of worthy people, who wish to take this course. We have on file in our office today, the names of at least half a dozen young men, outstanding young fellows, who are very anxious to go into public health work. They believe, as I do, that public health offers a very attractive future, and they are willing and very glad to start in this work. And I wish to state that your local health officer in Michigan is a different type than he was three or four years ago. At our winter conference, we had an entirely different group than we did five years ago; you would not recognize them as our old Michigan Public Health organization. It will be one of the regrets of the year when I, as I expect to have to do, sit down and write these young people that the course has been closed, that we have not the funds to go on with it, and that we will have to close the door of opportunity to them. We get people from all over. We have a man now from Seattle in our office taking this course. One of the internes at Flint wants to come here. There is a young chap just finishing an interneship in Chicago who wants to come. There are a couple of Dr. Bruce's boys who are figuring on coming in. We have six that I consider splendid candidates for future public health work.

Here is another thing we have been able to do: We have been able to pick out of this group in Michigan good prospects, and we have been able to give two or three fellowships a year, at either Harvard or Hopkins. I have now two young fellows, one in Harvard, and one in Hopkins; we have selected one of Dr. Carey's boys, and the first of September he goes into Hopkins for a year's training. We take the prize of the lot, and, where they want to go on, we give them that training. The field is getting attractive for a fine group of young men who are anxious to get into this line of work.

As to the health officer O.K.'ing the indigent bills, I do not think that that is the health officer's function. If the Board of Supervisors hires you or me, and puts a bunch of bills ahead of us and says, "Here, should these be paid?" I do not know what you are going to do. If you say, "I do not want these things, and it is none of my work," they might say, "If you do not want to do this, we will get somebody else who does." It is a detail that must be worked out between the physicians and the unit and the supervisors. As I said before, the results depend entirely upon the type of men that are put into the places. I do not believe it is the health officer's business to O.K. the doctor's bills.

The county unit has no more supervision over the city unit than it would have in the State of Ohio, as far as I know, and vice versa; they are separate political divisions, and I cannot see where the authority of the two should clash in any way. The county certainly hasn't any business in the city, and the city certainly hasn't any business in the county. It seems to me that somebody should tell somebody something, and do it in a hurry, because there is not any reason, and should not be any reason, for dispute, because the State law states specifically what your boundaries are, and I cannot see why either one of them should meddle in the other fellow's affairs.

The Advisory Committee: We tell these young men going out: Get an Advisory Committee from your County Medical Society. If I was going into Saginaw County, I would go to the president of the County Medical Society, and I would say, "You people elect or select for me an Advisory Medical Committee." That is our advice to them. As far as I know, it is what is being practiced in the organizations that we have anything to do with.

The control of the nurse depends entirely upon the health officer. I want to say to you that we find many of these older county nurses objecting to health officers and to the formation of county health units. That has crept up in a good many places. The nurse has been on the job there, and she sees at once that, if we get a county health officer in there she is going to lose some of her authority. She may not publicly oppose this thing, but we have found them in numerous counties objecting. That is, they would go to their supervisor that they stood pat with, and they would oppose this thing under cover. There have been some dismissals of nurses by health officers after they have been elected. Other supervisors have seen what was coming, and finally settled down to medical supervision. The control of the nurse is absolutely the health officer's business. What he should do, if the nurse meddles in something that is not her affair, is to tell her of her mistakes, and if they are repeated, she should be let out.

Now, in regard to the health units sending patients to Ann Arbor, that is welfare work, as far as I see it, and I cannot see why the county health officer is monkeying with welfare work in any way or shape. It is not our fault that the county health officer has anything to do with the care of your poor people, to send them to Ann Arbor or Jericho. That comes to a different committee, under entirely different supervision, and is handled in an entirely different way. There again, there has been an overlapping of authority, the assuming of a duty that is not theirs, or else somebody has pushed something onto somebody.

Dr. Corbus (Chairman): I am going to read this, and perhaps somebody would like to answer it. It is a type of criticism that we have coming in, and we do not know exactly what to do or to say, but they come to the Council. Here is one from Decatur, from Dr. Bock. He enclosed a clipping from Ann Arbor, Michigan. (Reading):

"Minus their tonsils, 26 pupils from Paw Paw started home to-day, following operations performed at the University Hospital here Saturday. The cost of the wholesale operations was charged to Van Buren County. The school nurse escorted a bus load of children here, after examination showed 116 of the children needed their tonsils removed. She plans to bring 25 more here shortly."

Here is the letter: "I enclose clipping from our local paper, which explains itself. We do this work here, and we wonder why this work should be carried to the University Hospital. If we cannot do this ordinary work for our people * * *

Dr. Slemons: Of course, that is not a County Health Department; that is the county nurse, with whom we have nothing to do.

Dr. Corbus (Chairman): Dr. Slemons says, as far as the county unit is concerned, that has nothing to do with it. In the letter he says that he understands there is a State law which provides for it. It is a rather difficult question.

Dr. Whittaker (Detroit): I read this from the Detroit News, last Thursday, written by Mrs. J. E. Leslie:

"Uncle Sam is quite concerned about the mothers in his kingdom. Any Detroit mother may have good care for whatever she can pay, or, free if she cannot pay at all, by applying to the Department of Health, 1300 Beaubien Street, phone Cadillac 2810."

That is one of the things that comes up.

Dr. Corbus: This talk is open for a very free discussion. We would like to hear from Dr. Ricker. Dr. Ricker, I thought you would like to talk on the Health Unit as it works in Wexford County.

Dr. Ricker (Cadillac): There are certain parts of this program that I would like to discuss. I had a talk with Dr. Slemons a few days ago in his office. We have a very successful Unit at Cadillac but there are always certain things that creep in. One of the things that I talked to Dr. Slemons about was the program of the late Dr. Kiefer. His object was to have a County Health Unit in every County in the State of Michigan, and that the County Health Unit be responsible to the State Health Department in every way. My experience with our County Health Unit has been that they are very much in touch with the State Board of Health. But there are other Health organizations working in our State which are not responsible to the State Board of Health. And with other parties working we hardly know where we are, so many other activities working we do not know where to place the responsibility. Again there is another point about the County Health Unit, as I have read the law, and as you read it over today, that is, that the intent of the County Health Unit was to do away with the Supervisors as health officers. In order to get the Health Unit into the County, you know it is necessary to get the good will of the Supervisors. The Supervisors are allowed to stand on the county health program and this is simply politics, which is very costly. I think that is a very essential point in regard to the relation of health in your county. If we are going to have a County Health Unit, with its responsibility to the State Board of Health, you must place the whole responsibility on your county health officer. As it is now, the two parties are in friction over certain things, in certain parts of the county, and it is not harmonious. Let us do away with politics and allow the Medical Society to direct the Health and Health Units of all Counties where they are working.

CHILDREN'S FUND OF MICHIGAN

Dr. Corbus (Chairman): We are tremendously interested, in the profession, in the things that the Children's Fund of Michigan is going, and is about to do. We would like to know as much of their plans as Dr. Carey sees fit to impart to us. We would like to know how we can be of help to the Foundation, if they desire it. We see great possibilities. Dr. Carey?

ADDRESS BY DR. BERNARD W. CAREY

Mr. President, and members of the Council: I am very happy to be here with you. I believe this sort of a conference is just exactly the sort of thing that spells the best future of public health. One would be dense indeed if he did not realize that every now and again situations arise in the projection of Public Health Programs which cause a great deal of friction. I think there is a very great obligation on the part of those of us who are trying to carry on this type of work. I think we are obligated to use all of the resources which are available to make our program a success. As I say, every now and again, we run into difficulties and misunderstandings. Indeed, we are somewhat like the good lady who saw a little youngster sitting on the curbstone weeping his eyes out. She stopped, patted him on the head, and said, "Sonny, what is the matter?" He replied, "My mother and daddy are having an awful fight." She said, "Why don't you run home? By the way, what is your father's name?" He said "That is what the fight is all about." (Laughter and applause.)

Sometimes I think our situation is almost comparable.

Mr. Chairman, I do not believe I am violating any confidence if I read you a letter written under date of March 22, 1930. This is offered as evidence of our belief in the necessity and efficiency of such a cooperative meeting as we are having today.

Dr. J. D. Brook, President,
State Medical Society,
Grandville, Michigan.

My dear Dr. Brook:

As you are aware, the Children's Fund of Michigan has created a Division of Child Health, with a rather extensive program of activity in that field. It seems desirable to us to have an advisory committee with whom Dr. Bernard W. Carey, the director of this division, may consult. I am instructed by the Board of Trustees to ask if you will be a member of this Committee.

Other members asked to be on this committee are as follows: Dr. Guy L. Kiefer, State Department of Health, Lansing; Dr. Henry F. Vaughan, Commissioner of Health, Detroit, Michigan; Mr. W. Pearce, State Superintendent of Public Instruction, Lansing, Michigan; Dr. P. J. O'Reilly, 4662 Grand River Avenue, Detroit; Dr. John Sundwall, Director of Hygiene and Public Health, University of Michigan, Ann Arbor, Michigan.

Sincerely yours,

W. J. NORTON, *Executive Secretary.*

We had one purpose in mind, which is typified by this meeting today. We wanted a representative from the State Society, to whom we could go and discuss our troubles, trials and tribulations. We haven't yet received a reply to that letter. Perhaps this is one of our difficulties. However, I am not going to preach to you.

Some two years ago, Senator Couzens came to the City of Detroit, and called together six men and said that he wanted to set aside some money that could be expended for the children of Michigan. In his own words, he said, "This ten million dollars is to be expended for the health, welfare, happiness and development of the children of Michigan, and elsewhere in the world, if you reach the point where you think you ought to go outside of Michigan." After

discussing the possible programs with Mr. Norton, who was the executive Vice-President and Secretary, we went to Lansing, to the State Health Department, and said to Dr. Kiefer, "We want from you the very best information you have as to how we can expend this money to achieve the purpose of the donor, as it relates to child health." From that conversation came about ten programs, eight of which I think we are carrying on.

The objective of our health program is to correlate the local resources which are available, for the betterment of public health, especially for mothers and children. So, in the Division of Child Health, I divided the program up into administration, nursing care (we have 32 counties with nurses in them today); a dental program of some 22 dentists, and 4 oral hygienists, as well as a summer dental program, operating in counties where there are not adequate dental services now available; and a health education program. We created a demonstration project in Menominee County, to show what was desirable from the standpoint of a Child Health Program. We hope other northern peninsula counties may be stimulated by this example to have similar programs.

By drawing a line westward from Bay City, you get into a cut-over, burnt-over territory, a territory where the tax valuation runs from about $1,700,000 in Roscommon County, to perhaps $10,000,000 in the more favored counties, and you find areas utterly lacking in medical service, unless you say that a doctor who resides forty miles away is available. You find counties without any dental service whatsoever, and, of course, no public health nursing service.

It seemed to those of us who were interested that maybe we would be best serving the purpose of the donor if we were to give these people a public health program which they could not possibly have for themselves. We hope that maybe in the years to come, conditions will have changed so that they can have something on their own resources. We have united these sixteen counties (indicating on map) into four consolidated health units. We have given them each a well trained health officer, recommended to us by the State Health Department. We have placed nurses in the counties and have given them a dentist. A sanitary officer completes the unit to take care of the sanitary problems. The law specifies how the county health unit shall be organized, as you have heard from Dr. Slemons. The Board of Supervisors of the County assembled, must elect three members of that Board, to serve on the Board of Health. So that, in these units it amounted to twelve members—twelve supervisors, serving as the Board of Health.

In addition, we asked each Board to have medical representation from the county on the Board of Health, and this has been done. Dentistry is represented; education is represented. The Board of Health, as so constituted by law, elects the health officer, and then, to make things doubly sure, the State Health Officer has made our men deputies of his department for the health service within that area.

In addition to the Board of Health, we have asked that a local committee be established. We want it for two purposes; one is in order that knowledge of the work may be disseminated more rapidly and further throughout the county, and second, that we may have the advantages of their knowledge of local conditions. We asked to have the Judge of Probate serve on this committee with a supervisor, superintendent of schools, a dentist, a medical man, and certain other important key people. In this way, we feel that we are safeguarding the combined interests of that community. Now, obviously, if a doctor does not go to the committee meetings, if he does not know what the program is all about, it seems to me he should be deprived more or less of his right to criticize, because if he goes and he gives the benefit of his advice to this committee, the nurses are not going to undertake that which is not for the best medical interest of that community. If, on the other hand, a proposal is made, and no medical man is there to give advice, I do not see why, if it seems wise to these good people, a program should not be undertaken. I am talking frankly and freely, because I think that is what you want. I am telling you what I think, and I am telling you, out of fifteen years experience, how some of our difficulties may be avoided.

We have two women physicians who go around holding classes of instruction for mothers. This is purely an educational program. We are trying to interest the mother in the growth and development of her chil-

dren. If there are any physical defects found through this or any of our programs, local facilities are usually available to take care of them. We refer them to the family physician. Last year, out of 150,000 children we handled, 25,000 were referred to their family doctor or family dentist. Of these, about 12 per cent actually had corrections made. Rightly used, it seems to me that the public health nurse and the health department can be a source of very great help to the medical men in the areas involved. We have a program in which we employ two ophthalmologists. Obviously, they need direction and assistance from the physicians. We operate mostly in counties that have no service of this sort. Obviously, we make mistakes. The only thing I can assure you of is that they are not intended to be made. In the County of Mecosta, where I thought we were to work largely in the outlying areas, I found that, through the local committee, the program had actually gotten under way the City of Big Rapids. The City of Big Rapids happens to have a very skillful ophthalmologist, Dr. McIntyre. He was very gracious; when we went to him and explained the situation, he said, "All right, go ahead." He said, "I think you will make mistakes, I think you will take care of people that you ought not to." But he said, "Obviously, you will take care of people who are in need of this source and who won't come to me." We went ahead. We were hardly started in the program before a case got into our clinic, and received a prescription for glasses—a case that had no right to our services—whose father owns two automobiles and tenement houses. Immediately, I telegraphed our nurse to visit Dr. McIntyre and present my apologies and to explain the situation. The doctor was very gracious. Of course, he did not like it; I did not like; but it was one of those things that will happen. Through our local committee, we are trying to avoid this situation as much as possible. We ask our committee to pass upon the indigency of people who are to receive the services, and then to limit ourselves as far as we can to their children.

We have built a modern clinic building for the children of the Northern Peninsula, which will serve, from our standpoint, a twofold purpose. We want to offer some expert service near at home to children who would ordinarily be sent through the Probate Court, to Ann Arbor; secondarily, to offer to the physicians of the Northern Peninsula a post-graduate institution, conducted by the post-graduate department of the University, which is entirely responsible for the medical practice. In truth, we are paying the bills, but through Dr. J. D. Bruce the post-graduate department of the University will guide the clinic.

The staff nurses made 18,000 home visits in the interest of mothers and children last year. About eleven thousand children were immunized with toxin-antitoxin, 70 per cent of these treatments were given by the local practicing physician. About 12,000 vaccinations against smallpox were made, with approximately $10,000 spent by local governments for a health program this year. It does appear that local people are interested in this health program. They are interested, for they are willing to pay in part.

Another type of program in which we are interested is, Child Guidance and Mental Hygiene. That is under the direction of Dr. Maude Watson. Next to Harper Hospital in Detroit, a Children's Center has been opened where children who are in need of mental hygiene will receive treatment, advice and direction. We hope to go into the schools to a greater extent than has been done, and take care of some of the children within the schools. We hope to educate the teachers to a better knowledge of and interest in child guidance here. We are also contributing to the establishment of two centers, one in Flint and one in Grand Rapids, in hopes of developing a modern, practical mental hygiene program.

We have entered the field of research to some extent. We have given $22,000, to see if we can find out, through Dr. Bunting, of the University Dental School, why teeth decay. We are giving $22,000 to the Yale Institute of Human Relations, to see if we can find out more why certain children behave as they do, to ascertain the relationship of environment and companionship, or the lack of recreation facilities of children who come before the Court.

We are trying to find out something more about orthodontia, something more about the development and growth of mouth, teeth and sinuses. This work is carried on by Dr. Lewis, an orthodontist here in Detroit.

We are giving $12,000 for the study of tuberculosis in certain children. This study

is carried on by Dr. Johnson, of the Ford Hospital, in conjunction with the St. Vincent De Paul Society. In the field of dependency, we have given $30,000 to the Michigan Children's Aid Society. We have given $50,000 this year to welfare organizations, for food and clothing for children suffering during this period of depression. We have given the Muskegon Probate Judge an appropriation of $7,500, to see if she can work out a placement home scheme for children that ordinarily would be sent to some institution for their care.

We have established a camp out here near Ann Arbor, for the colored children of Detroit, to give them a little vacation during the summer time. During that time we are going to see them, and, if we can, instill some health habits, and correct some of their dental defects and give them a health examination.

So, I might go on with the other things that we are doing. However, time does not permit. We come to the grand total of $1,166,000 which we have appropriated and expended for last year's work. This ten million dollars was given for a definite purpose. We are obligated to meet the desires of the donor.

In so far as I am concerned, I do hope that you people may see fit to appoint somebody, and I will extend an invitation to you, Mr. President, or any one that you may select, to joint with us in a committee, that we may not only safeguard the interest of the medical men of the state, but have as well, the best possible medical advice on our program.

If there are any questions that you folks may want to ask, I would be delighted to answer them, if I can.

I thank you. (Applause.)

Dr. Corbus (Chairman): We are so greatly appreciative to you, Dr. Carey, for this very fine talk. It is the sort of talk that the Executive Committee felt we would like to come up here to hear. We would like to have a member meet with your committee. We should be extremely happy to do it. And even this Council, who are supposed to be the representatives of some 3,500 men, are supposed to be more or less closely aware of the health activities which are going on, even this Council has not known what it is all about, I know. And if this Council has not known what it is all about, I can assure you that the rank and file of the profession have known even less.

So we are tremendously appreciative of this opportunity of learning something about it.

Now, this talk of Dr. Carey's is open for discussion. If you have any questions, I know Dr. Carey will be very glad to answer them.

Dr. R. C. Stone (Battle Creek): It has been a very rare privilege for me to hear Dr. Carey discuss this work of the Couzens Fund Foundation. As Dr. Corbus has said, those of us who have been on the Council and on the Executive Committee, while we have thought and felt that we knew something about it, yet we have not known entirely the program. We have been very sympathetic with those features of the program which we have had knowledge of. I am sure, if all of the medical men of Michigan could have heard Dr. Carey talk this afternoon as he has, that much of the antagonism, perhaps, if there is antagonism, or, at least, much of the friction which has been brought up from time to time, and the comments which have been not too good, would be overcome immediately by this discussion of his.

It certainly appears to me that, with the splendid work which the Couzens Foundation people are doing, and their objects in doing it, and their efforts and insistence upon having the coöperation of the Michigan State Medical Society, it is up to this Council and up to the members of the Society to get behind a program of this sort and coöperate with Dr. Carey and the rest of the people in this Foundation. It is a splendid work that they are doing, and I personally am very appreciative of it, and I hope that, as time goes on and the work progresses, all of the difficulties which have come up and which will come up, will be overcome, and that you, Dr. Carey, will have the medical profession of Michigan coöperating with you to the very limit. (Applause.)

Dr. Corbus: I hope there will be further discussion.

Dr. Carey: Mr. President, might I say this? I wish they would discuss it. I believe, honestly, with the exception of the instance of Dr. Fairbanks, and this instance of Dr. McIntyre, those are the only two instances I know of, of friction among the medical men and this program. Now, if there be friction, how can I correct it, how can I change a situation, if I do not know about it? After all, it has got to come before I can do anything about it, and I wish you would tell me about it. I tell you frankly, I cannot put on the best type of a Public Health Program unless the medical profession is behind me.

Dr. J. D. Bruce (Ann Arbor): There is very little I can add to what Doctor Carey has said in so far as the development of the Northern Michigan Children's Clinic is concerned. In its association with the Michigan State Medical Society and the University Medical School it is in conformity, we believe, with the principles which the Chairman enunciated upon the opening of this meeting today. My particular interest in it has been the opportunity it will afford for post-graduate education and the opportunity it will bring to our profession, permitting its members to be of greater usefulness in all of our northern Michigan communities. The plan in general is this: The Children's Fund of Michigan has erected a building at Marquette, equipped with laboratories, examination rooms, accommodations for twelve children, administration rooms, etc., and an amphitheatre for teaching purposes which will accommodate about seventy-five. The Foundation has given us a sum of money to employ a full-time pediatrician, and we have been very fortunate in securing an extremely well-trained man, who, I am sure, will be very satisfactory to the profession from a teaching standpoint and extremely helpful in the diagnosis and care of pediatric conditions. The plan is to hold, at regular intervals, clinics at Marquette and in the various centers of northern Michigan. There the children that come in will be investigated, diagnosed and, when of teach-

ing interest, will be used for demonstration purposes. Very little treatment will be given directly. Patients will be referred to the family physician, with recommendations regarding care. If that is not feasible, they may be kept for further observation or treatment at the Clinic, or, if facilities are not available in their home community or at the Clinic, they will be sent on to Ann Arbor, as is being done at present.

The patients who will be admitted will be those adjudged indigent by the local authorities, and, in addition to these, certain cases will be presented by the medical profession itself for diagnosis and other help. There will be no practice of medicine as we commonly understand it in this program. It is largely a diagnostic, consulting, and teaching operation, with treatment only as agreed upon by the local medical committee and the resident representing us. I might explain that in each of the centers the local medical society has named a committee whose duty it is to inform us how best we may serve each community, and to act as advisors of all problems arising through the operation of the clinical service. When cases are seen that present problems of such difficulty that it is judged that the local men cannot take care of them adequately these cases will be sent on to Ann Arbor or other centers. Orthopedic cases will be disposed of just as they are at the present time. Cases other than those in the orthopedic group will be sent back to their local doctor, and all of the treatment will be under the local physician except such cases as come in with the request that special examinations and special attention be given by the pediatrician in charge. At the present time the whole operation is in conjunction with and largely under the control of the local society. There will be no conflict with the present local arrangements, only enlarged opportunities.

In northern Michigan rather an unusual condition obtains. I recognized it to some extent when I drove through northern Michigan in Cadillac. I recognized it doubly and trebly covered it this spring in a Chevrolet. After driving 267 miles one afternoon, after three o'clock, some of the fellows apologized for keeping me so long on my feet, and I told them they need not apologize at all on that score, because I was much more comfortable on my feet than I was sitting down. (Laughter.) But as a matter of fact, the Upper Peninsula is an empire in itself. It is a tremendous territory. From St. Ignace to Sault Ste. Marie is about 65 or 70 miles; from the Soo to Marquette it is 187 miles; from Marquette to Houghton is 120 miles; from Houghton to Ironwood is 135 or 140 miles; from Ironwood to Escanaba is about 200 miles; from Ironwood to Menominee is 260 miles. You can see the tremendous distance to be covered, so that instead of establishing one center in Marquette and hoping to take care of all the people of the class contemplated, we are planning the establishment of sub-centers in the towns I have just enumerated.

Now there is a certain situation in which we can be very helpful—helpful to the State and helpful to the people. At the present time a considerable number of children as well as adults are being sent to Ann Arbor for treatment. Of these cases quite a number are relatively easy to deal with and oftentimes are not particularly valuable from the teaching standpoint. Such cases are coming three or four hundred miles not infrequently, at an unwarranted expense for transportation. With the establishment of these centers, large numbers of patients can be taken care of by the local practitioner, and as time goes on, in some of these counties, as is under way already, I am hoping that remuneration will be made to men who can take care of conditions that arise in the ordinary practice of medicine and surgery, rather than sending such cases the tremendous distance that is now being done. There will still be plenty who should go to Ann Arbor to benefit through the opportunities which the State has generously supplied in buildings, equipment, and personnel. In the program contemplated large numbers of cases will be brought to light, needing special care, and of such extreme interest for teaching purposes that they should go to Ann Arbor. Through this cooperative movement, we can save the State a very considerable amount of money and help Mr. Couzens in his laudable desire to bring aid and comfort and opportunity to many children otherwise unprovided for.

In his introductory remarks Doctor Corbus has indicated how importantly the Michigan State Medical Society regards our program of post-graduate education. He has also called attention to the increasing number of agencies seeking responsibilities in medical, social, and economic problems in which the medical profession has always figured prominently. If I correctly interpret his remarks, he feels, as I believe we all do, that we must give much careful and sympathetic consideration to all proposals offering seeming opportunities for human betterment. Our knowledge of medical and social needs places us in a very strong position and one of great responsibility. The wisdom with which we meet these problems will be, no doubt, a factor in deciding questions of much importance to our profession and to those we serve. Doctor Carey has told you that the professional part of the Children's Fund program in northern Michigan is in our hands. This association gives us opportunities we have long desired in the way of post-graduate teaching in northern Michigan and in addition to this it would seem to widen greatly the opportunity for service which every man in practice should be looking for.

Dr. Ricker: Dr. Carey, at the time of my previous statement, I did not realize the embarrassing position I would be placed in after hearing your report.

As Councilor, I receive many complaints from the large area which my territory covers, some of which should be given worthy consideration. I feel the Michigan State Medical Society should become closely affiliated with your Fund and know of its workings.

My first experience was a personal one, not being familiar with the fact that the Couzens Fund was in Osceola County. (At this point I wish to explain that I had given several years of my life to eye, ear, nose and throat work, and felt confident to do refractions, but owing to the small amount of revenue from this source, it was necessary that I do other things to make a living.) I had a case of osteomyelitis which had been coming to my office for treatment. The family was fairly well to do and had always paid their bills although not as punctual at all times as I would have liked. On this occasion which I wish to refer to, the father and three children came to my office. During the course of the treatment for osteomyelitis, the father asked me if I was able to fit glasses. I said I was. He told me that the two children had been told to go to Reed City to consult your doctor on this particular Saturday, but inasmuch as they were coming to Cadillac, he brought them to see if I said they needed glasses. I refracted these children, both of them needing glasses.

The second experience was a patient who lived in Lake County who was on the way to Marion, some twenty miles beyond Cadillac, and being a rather bad day to travel, the mother brought the child to me and asked me to see if it needed glasses. I re-

ported that it did. She said that they had been told by the nurse that they must go to Marion to see the physician for the Couzens Fund who was to be there on that particular day. I fitted this child with glasses, which they paid for, and also examined the mother as she also needed medical attention. In this case the doctor for the Couzens Fund was not only taking the child away from the general practitioner who was able to do refractions, but was also keeping the mother from the advice of her physician. This I attribute to no fault of Dr. Carey's. It was simply a case of an over-zealous nurse who wished to accomplish some of the things which she was advised should come under her program.

I was very glad to hear Dr. Slemons of the State Board of Health say that the County Health Unit has nothing to do with the welfare work. That is not their position. One of the biggest bugbears we have had this year is the county health agent dealing with welfare work. It has taken away the patient that is able to pay who might have whooping cough, chicken pox, or something of the kind and they are holding them up, taking the family and making the health officer the advisor from that time on. I have had three young men with me in the last four or five years and they are the ones who are asking, "Where are we going to get off at? Where are we going to get our practice? What have we got left to work on?" We who have been in practice for years are assured of a living because we have an established practice. There is a point about this that should be watched to see that it is run successfully in order that the younger men may come into the northern part of the State. They do not have any trouble in getting them to come to the cities because there are so many different lines there for them to deal with. But we have very little to offer in the rural communities after the County Health Unit and welfare workers have sorted out their patients. I assure Dr. Carey that I have enjoyed his report and am simply giving my own personal experience in these things in which we are vitally interested.

Dr. E. J. O'Brien (Detroit): I want to emphasize the great value of such organizations as the Couzens Fund. I think the question of that case of osteomyelitis brings up a point that medical men very often forget. That case, while it was under the observation of Dr. Ricker, at the same time there were a couple of children who needed refraction, and Dr. Ricker did not know about it. It took the Couzens Fund to find out that they had to bring the cases to Dr. Ricker's attention. I think there is apt to be a slip-up quite often in these things, when somebody should aim by it and he does not. But, on the whole, I think well of the movement which takes up these things. That certainly must not be construed as a criticism of Dr. Ricker. He could not get around to the number of families to pick out everybody who might need something. An organization of this sort can. If it is properly managed, and especially after this splendid suggestion of Dr. Carey, of working with the medical profession and the medical society, I think we can all get in accord, and it will work out all right.

Dr. Paul R. Urmston (Bay City, Mich.): I represent, as councillor, most of the counties in blue up there (indicating on map), and I will say now that I have not heard a complaint, as councillor from that district comprising the ten counties north of Bay City, from the central portion of the state to Lake Huron. I was certainly interested today to know how the Couzens Fund is working up there, and I will be more interested now to make a survey of those counties, to see how they are working. The only way we have any contact with the Couzens Fund in Bay County is in regard to the dental clinic. I have asked a number of dentists, and they have no complaint about the way it is working. I would be interested to know if Dr. Carey, or somebody connected with the fund, would be available as a speaker before the county societies, and in that way we could present this fund to the individual doctors, so that they would have a better understanding. I am sure, if somebody from that department was available, that all of the counties in the state would be glad to have a speaker from that department, to interest the doctors and also to educate the supervisors and your county probate judge.

I think all of the criticism so far that there has been of this fund, or any other fund, and through our county itself, which has been going on for years, is through our probate judge and supervisors. There is a law in the state that we have nothing to say about, and in our own county at the present time the supervisors and the probate judge are restricting the number of cases sent to Ann Arbor. So they made arrangements with the local doctors to carry on that work, and relieve the county of the burden and expense of sending them down there. We are not so far away; but I can see where those in the Upper Peninsula could be done cheaper up there, than to be sent to Ann Arbor. If the supervisors and the county probate judge were educated on that point, we hope the doctors would be satisfied, and we would not have any objection to any of these funds.

Dr. Corbus (Chairman): I regret to have to close the discussion. I will call on Dr. Carey, if there is anything further that he would like to say.

Dr. Carey: First of all, I want to offer my apology for my nurse in your county. I did not know of that instance. However, I hope that you will be compensated in part for the loss of those people. It may be that our scheme is wrong. If the local people do not know, if the judge of probate, the supervisors and the local doctors, and the key lay people, and the superintendent of schools, if they do not know who is poor in the community, how in the world are we going to know? We ask them who shall receive this treatment. I know well enough that I am going to slip, but I want you to know that it is not intentional, and we are doing everything we can to prevent it.

Relative to a county meeting, we would be glad to go. If I could come myself, I would be very happy to go; and if not, I can arrange for someone else to go to the meetings, certainly. (Applause.)

THE KELLOGG FOUNDATION

Dr. Corbus (Chairman): A matter of regret that I have to announce is that Dr. Pritchard could not come, owing to the sudden death of his associate. President Stone has a letter from him, and perhaps he will feel that he is able to comment to some extent on the Kellogg Foundation. President Stone.

Dr. R. C. Stone: Dr. Pritchard came to see me Sunday noon, and wished me to extend to you his very deep and sincere regret that he was unable to be here today—his absence being caused, as Dr. Corbus has said, by the very untimely death of his associate, Dr. Selmon. Dr. Pritchard in his letter asked me, if there were any questions

that came up that I could answer about the Kellogg Foundation, to do so. By the way, he said I should represent him here. I must admit, though, even though I have had several discussions with Dr. Pritchard regarding the Kellogg Foundation, that I am very much in the dark as to what their ultimate purposes will be. Their work thus far has been largely, almost entirely, confined to school work, and building up adequate schools with definite health programs, in the rural communities. They have built a school at Gull Lake, in Kalamazoo County—with the help of the supervisors; they have not done it all. They have installed in the school examination rooms, record rooms, and social service, and have given these children complete examinations, including a complete physical examination, and including an X-ray of their chests. Their work has been entirely—Dr. Pritchard emphasized it to me, that their work will always be only in cooperation with the medical profession. In counties where they are working now, he is coöperating, and the county societies are cooperating with them. He has told me many times that they will not consider operations in any county in which the county societies and local doctors will not coöperate. They are taking the same position that Dr. Carey has taken in regard to the Couzens Fund. They do not wish to take away the work of the doctor. They want to educate the public upon the need of a health program, and carry a health program which will be constructive. They also want to help the doctor by giving him a certain type, if you may call it that, of postgraduate training in health problems.

How far reaching the work of the Kellogg Foundation will be remains to be seen, but I am positive I can say this as quoting Dr. Pritchard, that whatever the wishes of the medical men of Michigan are, in cooperating with them, that they will be very happy to coöperate in so far as their means and their program will allow.

I think that is about all, Mr. Chairman. I am very sorry Dr. Pritchard could not be here, because he could go on and tell you many things that I would not feel at liberty to discuss. But I am sure on another occasion, if it is possible, he will be very happy to talk.

ADDRESS BY DR. STUART PRITCHARD

Medical Director, W. K. Kellogg Foundation
BATTLE CREEK, MICHIGAN

The purposes of the W. K. Kellogg Foundation are to directly or indirectly become actively engaged in child welfare; to consider ways and means of helping in matters of child health, child education, child recreation, child character building, and to influence school children so that health education may, in turn, penetrate the school, the home, and the community.

At the present time our chief interest lies in the rural school problem. We wish to encourage the consolidation of small country school districts, and to establish a central school, which includes all classes and grades up to university entrance, where vocational training and health courses may be added to the curriculum, so that the rural school children may have an equal, if not a greater opportunity, when compared with that of urban pupils.

The Foundation supplies the health supervision of the consolidated school for an indefinite period of years with the hope that in the years to come the community will see fit to continue most, if not all, of these activities, so that the work of the Foundation may be transferred to some new field to "further carry on."

Since the health supervision part of the proposed demonstration concerns the members of the local medical profession and since much of the success of the project depends upon their hearty support, therefore, it would seem desirable to set forth a statement to serve as a basis for cooperation between the demonstration staff and the local physician.

It may be stated at the outset that the Foundation has no thought of coming in as a competitor in the field of curative medicine. Its chief concern is in the prevention of illness and the maintenance of a high health standard.

The procedure to be followed will, it is believed, conserve and protect the interests of the private practitioner. It is anticipated that such activities will stimulate the growth of a new relationship between physician and patient whereby both will profit far more than in the past from reliable medical information and high class medical service

aimed at keeping all members of the family in health.

The work of the W. K. Kellogg Foundation will not only be carried on in close cooperation with the local medical profession, but as far as possible the services of local physicians will be utilized.

The services of the staff will, for the most part, be concerned with the following:

(a) Health examinations of school children carried out at the schools.

(b) Health counseling and follow-up work by nurses to bring about correction of health defects by the family physician.

(c) Assisting public health officers and local physicians in carrying out the program of immunization against the contagious diseases.

(d) Health examinations and health counsel for the preschool children carried out in health supervision centers.

(e) Ill children presenting themselves at these health supervision centers would be referred to the family physician.

(f) In referring an individual to a physician, in case he has no family physician, he would be given a list of physicians approved by the County Medical Society.

(g) Demonstration staff nurses visiting the homes would, in case they rendered any nursing service, follow the instructions of the physician in charge of the case and be careful in expressing medical opinions. The local physicians would be used as much as possible.

(h) In the case of indigents, occasions may arise in which medical and nursing care would be given by the members of the Demonstration Staff, but only after investigation, advice, and consent of the County Medical Society.

During the entire health supervision program the school boards, the children, parents, and the community are constantly reminded of the importance of the family physician. He is made a part of all programs and is paid for the work he does. The Foundation makes it a rule that no territory is entered without the consent, approval, and promised coöperation of the local medical society, and all matters of procedure are discussed with its executives. In this way the local physician is an active part in the program, his wishes are considered, and it is the desire of all concerned to elevate his standing in the district and to enlighten the citizens more fully of the value of the doctor to the province or state, the community, and to the individual.

TUBERCULOSIS ASSOCIATION

Dr. Corbus (Chairman): Mr. Werle?

Mr. Werle (Secretary, Michigan Tuberculosis Association, Lansing, Michigan): I do not know that there is anything to be added by a lay worker, except perhaps the assurance that after nearly a quarter of a century of work in this field, on the fringe of medicine, as a social worker, I have learned that the leading social working agency is the medical profession. It antedates by centuries the specialist who calls himself a social worker. Anything we do in tuberculosis work today has behind it the inspiration and the vision of medical men. Many years ago it was made very clear to me in my training that the tuberculosis problem can never be solved by the social worker or the social working profession. It can be solved only by the medical men. We in social work cannot go any further than the medical men will let us go. Now then, if occasionally workers in medical social service makes mistakes, or overstep, or are overzealous, it is probably because of a buoyant spirit more to be directed and commended than condemned. It has been made clear, I think to a measure, in this resolution, and I think it is the contention of those of us who are not trained actually as medical men, but who work in this health field, that the next step ahead in tuberculosis must be in arousing a closer interest and more active and intelligent understanding of the handling of the tuberculosis case by the man in general medicine.

Perhaps it would be of some interest to the men here to hear a little something of the educational activities of the Michigan Tuberculosis Association, so that you might see why we have come to this particular conclusion again now, as we have often before. When the tuberculosis movement was organized, it was organized by medical men, and it has always been under the complete control of medical men. There have been times when laymen have held high executive offices, but there have always been in the Michigan Tuberculosis Association a preponderance of medical opinion and medical

men in the handling of its affairs. These medical men, who do work in this field, pointed out to us that the tuberculosis campaign divides itself easily and naturally into two heads. One is immediate combat with the disease itself wherever it is apparent; and that, of course, is the medical side of the campaign. Then there is the other side, which deals with the disease where it has not yet manifested itself, or before it should manifest itself; in other words, education.

As you probably know, the tuberculosis movement brought into existence various types of health education endeavor, because it was found that the ethics of the medical profession would not permit an aggressive attack on this sort of hidden disease.

In an educational campaign against tuberculosis, the tuberculosis association has two purposes in view. One is the education of individual children in personal hygiene, with the ultimate goal of an understanding of community hygiene, arousing a demand for an understanding and appreciation of scientific medicine. I think, perhaps, on the side, I might say that for years and years there has been no other agency so aggressively opposed to medical quackery as the voluntary health agency. The second point is the education of adults for an immediate effect in community consciousness in health. The immediate effect of that campaign with adults is the provision of money for public health purposes out of public funds. For example, you might have noticed this session of the Legislature passed bills which make available out of state money about $4,000,000 for the next biennium for control of human tuberculosis. That is one result of the steady educational pull of the tuberculosis association. Another reason for educational work is that it was felt to be useless to undertake any purely medical campaign because of the peculiarly chronic and hidden nature of the disease and the restrictions of medical ethics.

The educational campaign is making its headway. It has brought to the public a knowledge of the need for scientific medical care, as I suppose no other campaign has done. It has gradually been hammering home to the people that they must go to their doctors early. Then, it has brought to the doctors an appreciation of the fact that the medical profession must prepare itself to make a diagnosis of tuberculosis. One other factor which is of very great importance in considering the tuberculosis problem is this: Unlike acute diseases, in tuberculosis one cannot easily determine the indigency of an individual. A family which has a household, and which is able to pay its bills, ordinarily would not be indigent in a case of diphtheria or whooping cough, for instance; but might be found indigent when the matter of handling a case of tuberculosis came up, because of the chronic nature of the disease, and particularly because of the need of a long period of recovery after actual hospital care and treatment. Therefore we find that the social worker more than ever must lean upon the opinion and generous point of view of the medical men, in determining what shall be done with a patient.

These are some of the problems which the Tuberculosis Association is engaged upon—the matter of health education, not specifically for tuberculosis, but very broadly, has engaged it for years in the belief that with an awakened public consciousness of what scientific medicine is, and of the need for adequate scientific control of disease, there would come to the medical profession the opportunity to find and to control early, the as yet unrevealed and unsuspected cases of tuberculosis. Up to date, and all around us, then, is the question of closer and closer control and coöperation with organized medical forces. This resolution which you have before you is merely another expression of a point of view which we never fail to keep in mind, namely, that the tuberculosis question, the solving of the problem of tuberculosis, the handling of patients, is always found at the door of the general practitioner of medicine. We have been endeavoring merely to help bring that job out to where he can handle it more efficiently. (Applause.)

Dr. Corbus (Chairman): Will Dr. Shepard or Mr. Werle speak on this?

Dr. B. A. Shepard (Kalamazoo, Mich.): Mr. Chairman, members of the Council, and guests: Not being a speech-maker, I wondered why you should send me that letter to come down to Detroit to talk to you. Then it came to me that possibly there was an explanation similar to what I had the other night, knowing that the Tigers were playing here; they asked me to speak a few words, asked me how long I would take, and

I said five minutes, and they said, "Can't you take ten, we want to empty the hall for dancing?" (Laughter and applause.)

Perhaps you can get out to see the game yet, although you are a little late.

I cannot reminisce with our president for the last one hundred years of our society. We have only been going in Michigan since 1908. The Michigan Tuberculosis Association was organized in 1908, about that time. I believe I have the date correct. That movement was started largely by the physicians, and some of our prominent citizens of the State. But, the underlying spirit was that of the physicians. The work went on. You will remember, the first office was in the office of Dr. Warthin, of Ann Arbor. The work went on and grew, and people became interested. Lay people became greatly interested in it, and got into the work heavily; and the work has grown now to where it reaches out and has its fingers reaching out into various kinds of work, educational largely, and has been doing clinical work. As the lay people have been coming into the work, it seems as though they have outnumbered somewhat the physicians or medical interests; and, they are interested in the medical side of it.

The tuberculosis problem will never be settled without the general man. Specialists cannot do it. The man who has come to limit his work to tuberculosis cannot settle the problem. It has got to be the general man, the man out in the field. The specialists are only getting the cases that go to the clinics, and the ones they happen to stumble onto or that are referred to them. We have held clinics throughout the State of Michigan more or less efficiently, and try to do good work. But, we have come to believe that is not the best way of functioning. We have felt that we are not quite as efficient as we ought to be. And, last year the Board of Trustees, or the executive committee for the Board of Trustees, decided to appoint a committee of representative medical men of the State, to confer and see in what way the Association could do better work. That committee met. That committee was composed of representative men of the various institutions and parts of Michigan. The outcome was the recommendation read by your chairman.

I do not know that I could say a whole lot more. A few years ago we had this same feeling, about two or three years ago, and it was suggested to this organization that we get together on some plan of work. But, for some reason, or for various reasons, we did not get it started to a very large extent. A little postgraduate work was done, and it went over in good shape, but to a limited extent. The men were intensely interested. Now, our idea is that we should help the general man to help himself, or have the general man to help the community, by getting him interested, and by getting him in closer touch with tuberculosis. In doing that, we hope we might take the postgraduate work to him. Instead of going into the community, for an occasional examination and diagnosis, or mis-diagnosis—and I do not mean any reflection on any of your members; but in fifteen minutes, a man cannot be very sure of himself; but, instead of going in and diagnosing fifteen or twenty cases, if we can get a man interested, in the community, who lives there, and is treating his cases, we have done much more for the cases of tuberculosis than we do by diagnosing a few of his cases.

Now, it is our aim and our hope that we may have your coöperation, and that we may work with this organization, the State Medical Society, and the other organizations which have been mentioned, along this line. We believe, if we can put over something of this kind, it will be bigger and better than anything that has been put over in any of the other states.

I have talked to some of the men from the various organizations, and I have yet to find anyone who does not see the opportunity of a big piece of work for tuberculosis. I have talked to organizations, and those I have talked with have been for it strong. The medical profession are coming now to do more work along health education lines. And, this is the opportunity. One of your organizations here in the state already has used our organization to some extent, that is, some of our personnel, to put over a health program along that line; and we hope that we may work with you, with the state medical society, in carrying to the doctors and to the communities a great deal of work, through our university, that will set Michigan ahead in solving the tuberculosis problem. I thank you. (Applause.)

STATE SANATORIUM COMMISSION

Dr. Corbus (Chairman): I have a special topic for Dr. O'Brien, "The Michigan State Sanitaria." I am going to ask him to speak now and to combine whatever comment he has to make with this subject.

ADDRESS BY DR. E. J. O'BRIEN (DETROIT)

I am very glad that Dr. Corbus has suggested an outline for my talk because there is not much to say about the Sanatorium Commission. The Sanatorium Commission fell heir to a cheap boarding house at Howell a few years ago and this has been going through a period of transition since.

We believed and still believe that a sanatorium should be a place for the care and cure of the tuberculous sick and not as a haven of rest for the indigent, chronic sufferer. To accomplish this end, we have tried as much as possible to have admitted to the hospital only those patients for whom something could be done. In other words, those patients in whom the diagnosis of tuberculosis was made early and sanatorium care was possible while their disease was still minimal in extent. We soon found that we were to run into many difficulties in carrying out this scheme and that even though, as Mr. Werle has told you, extensive campaigns were carried on to get patients to the doctor early for an examination, many of these patients were incorrectly diagnosed or, if diagnosed, were left on indefinite care and not sent to the sanatorium until the disease had progressed so far that treatment became impossible.

I would like to correct Dr. Werle on one point that he made. Tuberculosis is not a chronic disease. It is a very acute disease and must be treated very actively. Dr. Werle and I were both present at the meeting of the National Tuberculosis Association at Syracuse last week, and papers read there showed very conclusively that tuberculosis comes on very rapidly and cavities, when they exist, come on early after the onset, many cavities forming as early as one week after the initial symptom, and that most cavities will appear within six months after the onset. Therefore, the treatment of tuberculosis must be based upon that knowledge.

I made a statement at the National Tuberculosis Association meeting last week which I would like to make again, that tuberculosis is considered a chronic disease and becomes a chronic disease merely because of the lethargy and apathy of the medical profession regarding it, and I do not qualify that.

The whole picture of tuberculosis has changed very materially in the last few years. While it used to be considered a disease of adult life, we know now that in most cases the first infection takes place during childhood and that adult tuberculosis is usually a reactivation of this early infection. With our present knowledge, there is no need for tuberculosis being the chief cause of death in this country today. If sufficient hospital beds were available and a proper check-up of all school children and the contacts from which their tuberculous infection originated were made, and early and active treatment of all these patients and other patients afflicted with tuberculosis were carried out, the disease, if not entirely eradicated, would cease to be a menace within twenty-five years.

At the Howell Sanatorium, we are having a great deal of trouble because we have only a few hundred beds and there are double or treble that amount of patients who need hospitalization. Instead of our having a proper selection of cases, the institution has a large number of old chronic, hopeless cases.

It seems very difficult at times to make people understand why discrimination must be used in this selection. If only five hundred beds are available, however, and there are a thousand patients that seek admission, five hundred of whom have minimal disease that can easily be cured and the other five hundred are hopeless chronics, it seems clear that the curable group should be given first choice. If we reversed the procedure and hospitalized the five hundred chronics, we could do nothing for them, and while they were occupying the beds the five hundred who might have been cured drift into a hopeless condition and it becomes a vicious circle. It would be nice, of course, if we had beds enough to take care of both groups but we must make a choice as there is just as much danger of infection to others from early acute cases as in the old chronic ones if they are not hospitalized, so we feel that our course is clear.

About twenty per cent of the patients admitted to Howell, sent there by doctors throughout the state, have no tuberculosis at all. Unfortunately, a proper diagnosis of

tuberculosis and the extent of the disease can not be made with a stethoscope. It can not be done by our most efficient experts.

Cavities are silent in a relatively large percentage of cases and râles are present in old healed disease, as well as in the acute. The doctors can not be blamed, therefore, who live in communities where an X-ray is not available because it is only by the use of the X-ray that a proper understanding of the extent of the disease can be determined. There is a territory north of Bay City where no X-ray machine is available. The Sanatorium Commission felt that if a mobile X-ray unit could be made available and sent throughout the state, especially in those areas in which it was needed, much could be done in getting the proper cases to our sanatorium.

Dr. Shepard has told you that tuberculosis can not be conquered by the specialist alone but that the general practitioner's help must be enlisted. In order to do this a campaign of education must be carried on. Dr. Bruce is on the right track and is trying, as much as possible, to hold post-graduate courses to give these men an opportunity to become more familiar with this disease.

It was our thought that possibly these mobile units might be used in various communities as the basis of a clinic to which the rural men might come and check up their physical findings with the X-ray, etc. It did not seem advisable that we, as a commission, should start out by ourselves and send this unit out from the institution. It was thought best to have its activities controlled by the Michigan State Medical Society, Michigan State Board of Health and the Michigan Tuberculosis Association and to work in conjunction with the Couzens and Kellogg Funds, so that a more unified effort could be obtained. We held a meeting at Lansing recently with representatives of these organizations and it was agreed that, if this mobile unit could be obtained, it would be placed at the disposal of the State Health Commissioner, who would in turn use it as I have just suggested. I should be very glad if, from this representative meeting, we could get other ideas which would benefit us and I welcome your comments.

At the recent session of the legislature, the malt tax was passed which will give us something like two million dollars for the erection of a new hospital in the northern part of the state, as well as for other tuberculosis work. The new hospital will be under the supervision of the State Sanatorium Commission. We hope we shall be able, there as at Howell, to make a proper selection of cases so that the best results from our limited number of beds may be accomplished.

The treatment of pulmonary tuberculosis, together with bed rest, is surgical. The old idea of living in shacks and trusting in God and fresh air is past. Patients must be treated in a well equipped hospital with a staff that understands tuberculosis and its treatment. We must all work together. It will be useless for Mr. Werle and the State Tuberculosis Association to carry on their active campaign for the enlightenment of the public, urging them to go frequently for examination, if the profession is not properly equipped to diagnose and recommend the proper treatment for these patients when they come to them.

Dr. Corbus: It is always a difficult thing to say who shall or who shall not receive free service. From experience over many years, I am of the opinion that Socrates and the Seven Wise Men would fail to come to any definite conclusion. (Laughter and applause.)

Now, as far as our order of business is concerned, we are through. This is one of the most valuable meetings that I have ever had the pleasure of presiding over. It seems to me, to bring the profession of Michigan, its Council, into contact with you men who are interested in the social actvities, and to get on a common ground, is the most important thing that we can do, as a Medical Society.

I am going to adjourn this meeting in fifteen minutes anyway, or before; but there is going to be an opportunity to bring up anything that you have in mind at this time. You know that there is an executive session of the Council. I do not want to stop anything that you are going to say, but I call your attention to the fact that there will be an executive session of the Council at 6:30 o'clock.

Dr. Powers (Saginaw): This is just some information I want to pass on to Dr. Shepard and Dr. Werle. I hate to pose as coming from a Bolshevik section, but at the last meeting of the Saginaw County Medical Society there was a very hot discussion about a recent clinic held in Saginaw, and the cause of the discussion was entirely due to the fact that in no way were the Doctors consulted as to the advisability of holding that meeting, or the fact that it was to be held; and the first information that we have ever had on a tuberculosis clinic being held in Saginaw was from the papers, according to the discussion as given at this Society. There was a very hot resolution that started, but fortunately it was not passed, which would have been rather condemning the Tuberculosis Society and their work.

Now, that is a very unfortunate situation, and I just simply mention it happening at the last Saginaw County Medical Society meeting.

Dr. Shepard (Kalamazoo): May I say that was not put on by the State Tuberculosis Society. That

was a local affair, by your own people, put on by your own people, as I understand it. At least, the State Society did not put it on. We have not put on a clinic this year. We are waiting on this proposition. We want to work with you, and through the profession, and through the Medical Association. We want the doctors to do it for themselves. That is what we are trying to get at. The very purpose is to work with the medical societies, and to have the doctors have these clinics as they want them.

Dr. Powers (Saginaw): It was put on under the auspices of the Saginaw County Tuberculosis Society, which I understand is a branch of the State Society. So that we, as a medical society, have to trace the blame directly to the State Society when one of their offspring does it.

Dr. Corbus (Chairman): This group would like to hear from the Wayne County Medical Society, the President.

Dr. J. Milton Robb (Detroit): You might call on me a month from now, and in another month I would not be President. I would rather be right than be President. (Laughter and applause.)

I am sorry I was not here during the majority of the afternoon. I do not know any of the problems that you have discussed. As far as I am personally concerned, I only have this one feeling, that the public hygiene gospel should be presented mostly by the men in medicine, providing it is going to stay as a permanent factor in the state. I see no way that a continuous service is going to be maintained. And I think that the feeling of those organizations who are coming in to do the work is that they are laying the foundation for the future, so that the man in medicine is going to be sufficiently trained, so that after they have withdrawn then he will continue; the medical men will continue, with what basic education they have obtained or gotten from this effort, to care for these people in the state. I cannot see, as far as I know, any objection to any of the efforts that I know of. I have this one feeling always, that whatever effort there is developed in the way of teaching, the post-graduate effort, rather than any effort to do otherwise, is found to run a state into a good deal of trouble. If you destroy the individualism of the people of the state, you have destroyed the state. And I know that those who are behind these funds must know better than we do that that is the basic principle from which they cannot deviate. I am not informed about all of the particulars at all. I wish I could have heard Dr. Carey discuss his problems. And I know many of the problems that Dr. O'Brien spoke of. I know that they will be conducted in a very definite and logical way.

It was interesting to me to find out a short time ago that the state was in debt to the extent of $800,000 in the county units, for tuberculosis work. I wondered just when and how this is going to be cured and handled, because, in the long run, the people of the state have got to pay for it, and we are the people of the state. It was a surprise to me to find out that that was true. If there is any way that the physicians, in handling this question, in any possible way through education, and through post-graduate effort, learn to handle these things at home, so that the expenditure is not increased and placed on a state that is already burdened, it will be a wonderful thing for the state. We here in the city are in the throes of a financial disturbance that I do not know how we are going to get out of. I wonder, too, if, in time, the individual can again accept the responsibility which has been so regularly accepted by the state itself. (Applause.)

Dr. Whittaker (Detroit): I want to say, in the absence of Dr. Sundwall, Chairman of the Legislative Committee, who had to be away today, that I was very much interested in Dr. Slemons' remarks, and also the remarks of Dr. Carey, and Dr. Stone. I want to say, in regard to the money which was set aside for the state to back up the work of these two men, I feel that our Legislative Committee this year was able to lend quite a tremendous influence in bringing both of these bills through the legislature. I am sure we had to have the help of these men in the work.

In going around the state and talking to the various County Societies, we cannot disregard the fact that there is a tremendous amount of unrest among the profession. As I have pointed out before, there are nineteen agencies operating in the State of Michigan, which are helping the people of the state, in addition to the efforts of the medical profession. It is undoubtedly due to the activities of some of these groups that the doctors are in such a state of unrest. I do not think these problems can be solved at a short meeting like this here this afternoon. I would like to bring to the attention of the Council that I hope that some thorough study will be made of all of the agencies that are being carried on in the state.

Dr. Kiefer was a very good friend of mine, and I had a great deal of regard for his judgment, and I know that this development of the County Health Unit was one of his pet projects. At the time he proposed the County Health Units, the Wayne County Medical Society went on record as being opposed to such a plan. We went on record in that way because of two things, because of these things, because in 1915 there was a law passed which gave the University of Michigan the right to establish a unit in each county in the state to practice medicine. We felt, with the development, in 1927 and 1928, when the County Health Unit went into effect, by combining the two laws it would be easy to step into the situation where the University of Michigan could carry on the practice in the entire state. I would like to see our Health Department not go so much into detail for the County Health Unit set-up,

but I would like to see our Health Department come out flat-footedly and say what they actually believe in, as far as the coöperation that is possible between the practitioners of medicine and the Health Department. In other words, I would like to see our Health Commissioner say, "It is my opinion that health work in the State of Michigan, and health development, consists of education work, and so forth," and the various four or five things that I have pointed out to the Council before, so that there can be a definite understanding between the two groups. I believe if each side understands each other, if each branch of medicine understands the other, that the end-result will be very much better.

I hope that, as a result of this preliminary meeting, in the next few months all of the various agencies operating in the state can get together and do a good job.

Dr. T. F. Heavenrich (Port Huron): I have had many kicks from the doctors in my district, and I have attempted to give some thought to it. Mr. Boker called me out of the meeting this afternoon. We have had a lot of training of specialists. The thought I have is this, that we ought to train specialists in social service work. Each one of the organizations has its own social service workers. We have so many of them coming into our county. Each one of them wants to find something which can be taken care of. They are all trying to make records. That is natural; that is human. Would it be possible for each county to organize its own social service staff, and let any of these organizations that wish to come into the county to do the work there, to make use of a local county staff? They are familiar with the people and their problems. And, to a certain extent, they are familiar with financial conditions. To expect that the Couzens Fund, the Kellogg Fund, the Tuberculosis Association, or any other society, can come in and start their social service worker immediately, and expect to get the best results, is wrong. I have seen them come into homes, and pick out patients that could have been brought to the clinics; but if we had our own organization, and turned that organization over to them, when they want to come into the communities, couldn't they get somewhere? Then the local doctors, under those conditions, would have confidence in the need for the cases that are being brought into the clinics.

Dr. Corbus (Chairman): Before the meeting closes, we would like to have a word from the President-elect of the State Association.

Dr. Carl Moll: I do not think any one man or any group of men are ready to crystallize all of the thoughts that we have had expressed here this afternoon. It will take time to think these things over. I have learned a great many things this afternoon. My conception of the Couzens Fund is rather nebulous. I was very glad to hear what Dr. Carey had to say. I think it would be a very wise thing if all the members of the medical profession in Michigan had these things put before them, and his paper and his remarks be published. Also, have him or one of his representatives go before the various medical societies of the state; that these men would have an entirely different idea of the Couzens Fund. We all received a letter that was written to the State Medical Journal, regarding the Couzens Fund. I think Dr. Carey has seen that letter; and if Dr. Carey has not seen that letter, I think he ought to see it.

Dr. Carey: I have seen it.

Dr. O'Brien: When we were first starting with the institution at Howell, and starting with the State and County Tuberculosis Sanitariums, the idea and thing was sold to the profession and the laity. Those institutions were to teach people how to take care of themselves, how to go home and take care of their folks, and take care of their relatives and other people from contracting tuberculosis. That is not so many years ago. We can recall in 1904 and 1905, and possibly as late as 1908, when this thing was first started. There was a slogan out, "No Tuberculosis in Michigan in 1930." I think Dr. Hafford remembers that slogan, "No Tuberculosis in Michigan in 1930." They were going to accomplish this by teaching people who had tuberculosis how to take care of themselves. Dr. O'Brien's statements are a little revolutionary. I do not know how the Michigan tuberculosis specialists are going to take this, that it is not a medical disease, that it is a surgical one. I am not here to argue that point with him. I do not know if any of the other men want to, but I want to say this, that we have started on a mighty progressive movement, a movement that is going to mean much to the profession of Michigan, not only to Michigan, but to the whole country, and we have got to bear the brunt of the burden of the pioneer work, and I think it is becoming to every one of us to put our shoulder to the wheel and put this thing across.

Dr. Corbus (Chairman): I want to thank the guests who so kindly came to us today and have given us so much. I am sure that what you have said to us today will go back to the profession through the Councillors. And, Doctor, by lapse, because I am not as familiar with parliamentary works as the Speaker of the House, but it has been called to my attention that I spoke of the Executive Session in which I should have said "Closed Session." The President, and President-elect from the Council meet tonight.

The meeting will now stand adjourned.

(Adjournment.)

COUNTY SOCIETIES

GRATIOT-ISABELLA-CLARE COUNTY

The May meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Park House, St. Louis, Thursday, May 14th. Nineteen members and three visitors had dinner together, after which President Harrigan called the meeting to order. Minutes of the previous meeting were read and approved. The application of Doctor L. F. Hyslops of Mt. Pleasant was presented for membership in the Society. This was referred to the Board of Censors and on their recommendation Doctor Hyslops was duly elected to membership in the Society.

President Harrigan then introduced Doctor Raphael Isaacs, Assistant Director of the Simpson Memorial Institute, Ann Arbor, who talked to the members on the different types of anemia and their treatment, illustrating the subject with lantern slides.

Some points the Doctor made were that you should give large doses of iron by mouth. He suggested ferric ammonium citrate in 50% solution, dram one, three times a day.

There is a distinct disadvantage in giving iron intravenous, because it has to get back into the intestine before it can be used by the blood.

There is not any advantage in giving iron in pernicious anemia.

No evidence that vitamins improve the hemoglobin.
No evidence that ultra-violet light is any help.
Arsenic may be beneficial in myelogenous leukemia.
One vial (10 grams) of ventriculin a day will maintain the blood after it has reached normal.
Blood can usually be returned to normal without giving HCl.
On behalf of the Society, President Harrigan thanked Doctor Isaacs for his instructive talk.
Meeting adjourned.

E. M. HIGHFIELD, M.D., *Secretary.*

MANISTEE COUNTY

The Manistee County Medical Society met at Mercy Hospital Tuesday, June 16, at 6:30 P. M., and seated eighteen at one of the dinners for which the hospital is famous—they must be eaten to be appreciated.

Following dinner regular matters of business were hurried through and Dr. C. L. Grant, President, introduced Dr. Richard R. Smith of Grand Rapids, who gave an instructive, interesting, and practical discussion of the Cancer Problem, with special emphasis on Cancer of the Breast.

The speaker presented, by means of lantern slides, a series of statistics of cases from the service of Drs. Smith and Vandenburg showing the actual improvement in the treatment of cancer of the breast as regards the mortality rate, meanwhile giving us a rapid survey of the field covered and the means by which these improvements have been made.

The Society enjoyed having Dr. Smith and wish to commend the Cancer Committee on the excellent selection of the speaker. More programs of this type will be welcome at any time.

ELLERY A. OAKES, *Secretary.*

JACKSON COUNTY

The May meeting of the Jackson County Medical Society was held at the Elks Temple Tuesday evening, May 19.

Dr. Meads, who is chairman of the June picnic committee, announced that the picnic would be held at the Inverness Country Club, where golf, swimming, boating, horseback riding and bridge will be available for those attending.

Dr. Porter moved that no meeting be held in September, inasmuch as it would come about the time of the State Medical meeting. Motion seconded by Dr. Clarke. Dr. Peterson amended the motion to the effect that the matter of the September meeting be left to the Board of Directors. The amendment was carried.

Dr. Peterson announced that the probable date of the Clinic sponsored by the County Society would be the first week in November.

Dr. Clarke stated that if the Health Education Committee was to put on a health exhibit at the County Fair this year it would be necessary for the Society to donate sufficient funds for this purpose. Dr. O'Meara moved that this committee be allowed to spend an amount to be approved by the President, Secretary and Treasurer. Dr. Enders amended the motion to the effect that the committee be allowed an amount not to exceed $185. Amendment lost. Motion as made by Dr. O'Meara and seconded by Dr. Porter was carried.

Dr. Riley announced that Sample & Blackmere wish to offer a golf prize to the best golfer among the Jackson medics. Dr. O'Meara moved that this prize be accepted and competed for some Thursday afternoon during August. Motion carried.

Dr. Kudner stated that there would be a combined meeting of the Foote and Mercy Hospital Staffs next month, at which time Dr. Carl Weller of Ann Arbor would conduct a Clinical Pathological Conference.

Dr. Enders, Chairman of the Membership Committee, reported the application of Dr. Norman D. Wilson back to the Society without recommendation. It was moved and seconded that the application be laid on the table indefinitely. Motion carried.

The meeting was then turned over to Dr. Clarke, who introduced Dr. Lupfi Sa' di, who graduated from the American University of Beirut and who is now connected with Harper Hospital, Detroit. Dr. Sa' di spoke on Arabian Medicine.

UPPER PENINSULA MEDICAL SOCIETY

The thirty-fourth annual meeting of the Upper Peninsula Medical Society will be held August 13 and 14, 1931, at Houghton. Headquarters and scientific exhibits will be at the Douglass House; business and scientific sessions at the Kerredge Theater, Hancock.

The following program has been arranged:

August 13—9:00 A. M. Registration of members at Headquarters (Douglass House, Houghton).

MORNING SESSION:

10:00 A. M. Welcome address by Dr. Hotchkiss, President, Michigan College of Mining and Technology.
10:15 A. M. Response by Dr. C. N. Bottum, Marquette, President Upper Peninsula Medical Society.
11:00 A. M. Address: Dr. C. C. Slemons, State Commissioner of Health.
11:30 A. M. Paper, Indirect Inguinal Hernia, Etiology and Treatment with Simplified Surgical Technic, Dr. F. S. Stocking, F.A.C.S., Calumet, Mich.
12:00 Noon. Adjournment for lunch.

AFTERNOON SESSION:

1:00 P. M. Paper, "Gastric Surgery," Dr. Norman Allen, Associate Attending Surgeon, Harper Hospital and Instructor in Surgery, Detroit College of Medicine and Surgery.
1:30 P. M. Paper, "Surgery of the Gall Bladder and Ducts," Dr. Waltman Walters, Surgical Section of Dr. Waltman Walters, Mayo Clinic.
2:00 P. M. Paper, "Acute Intestinal Obstruction," Dr. R. C. Stone, Battle Creek, President, Michigan State Medical Society.
2:30 P. M. Paper, "Pelvic Infections," Dr. Norman F. Miller, Iowa City, Prof. Obstetrics and Gynecology State University Iowa College Medicine.
3:00 P. M. Recess, 15 minutes.
3:15 P. M. Paper, "Surgical Kidney," Dr. Armour Fletcher, Milwaukee, Professor of Genito-urinary Surgery, University Marquette Medical School.
4:00 P. M. Paper, "Nephritis," Dr. E. K. Kerr, Chicago, Professor Internal Medicine, Rush Medical School.
4:30 P. M. Paper, "Pathology, Heart and Kidneys," Dr. V. C. Weller, Ann Arbor, Professor Pathology, University Medical School, Ann Arbor.
5:00 P. M. Adjournment.
7:30 P. M. Society Banquet for Physicians and Ladies at Douglass House.

August 14, MORNING SESSION:

Meeting called to order at 9:15 A. M.
9:30 A. M. Paper, "Coronary Disease," Dr. N. C. Gilbert, Chicago, Specialist and practice limited to diseases of Heart.

10:30 A. M. Paper, "Some Phase of Orthopedics," Dr. V. L. Hart, Ann Arbor, Professor, University Medical School, Ann Arbor.
11:00 A. M. Paper, "Surgery of Sympathetic Nervous System," Dr. A. W. Adson, Surgical Section of Neurology, Mayo Clinic.
11:30 A. M. Paper, "Mental Health of Children," Dr. E. H. Campbell, Medical Supt., Newberry State Hospital, Newberry.
12:00 A. M. Paper, "Diseases of Rectum," Dr. Louis Hirschman, Detroit, Proctologist.
12:30 Noon. Business Meeting and Election of Officers for 1932.
1:00 P. M. Adjournment for lunch.
2:00 P. M. Golf for members desiring golf at Houghton Club.
2:00 P. M. Clinic at St. Joseph's Hospital, Hancock, Mich.

WAYNE COUNTY

Dr. H. W. Plaggemeyer, Detroit, assumed the presidency of the Wayne County Medical Society as of July 1, 1931. He will serve in that capacity for one year and will be succeeded on July 1, 1932, by Dr. H. Wellington Yates. The personnel of Dr. Plaggemeyer's thirty-three boards and committees will be announced in The Bulletin of the Wayne County Medical Society, issue of July 15, 1931. The committees will be composed of some 238 physicians and surgeons of Detroit and Wayne County.

The attendance at the four postgraduate courses held in Detroit from June 15 to June 27 was most satisfactory. The graduate subjects were fractures, internal medicine, gynecological pathology, and surgery.

The list of essayists and papers presented before the Wayne County Medical Society and the Noon Day Study Club during the 1930-31 season was published in two issues of the June Bulletin. One hundred three speakers appeared during the eight months' period from September, 1930, to May, 1931, of which seventy-nine were Detroit physicians and surgeons. Twenty-three lecturers were importations from other American and European cities. The Program Committee was most encouraged to note the large number of Detroit men who are writing and reading papers.

Dr. Frank A. Kelly, Treasurer and a member of the Board of Trustees of the Wayne County Medical Society, was honored by being elected President of the American Medical Golfing Association, an organization composed of Fellows of the American Medical Association. The election took place after the annual tournament and dinner at the Aronimink Country Club, Philadelphia, June 8. The A. M. G. A. lists some 1,000 medical golfers among its ranks.

The Cafe of the Wayne County Medical Society is enjoying great popularity these warm days. The roof garden, opened formally on May 28, is above and away from the heat and turmoil of Woodward Avenue and is always refreshingly cool and handy for the medical men to enjoy good food and quick service. During May, the Cafe served 2,024 luncheons during the twenty-five working days. Its total income amounted to $1,320.00.

Dr. Murdock M. Kerr, a member of the Wayne County Medical Society, is a candidate for election to the City Council of Detroit.

Mail handled in the Executive Office of the Wayne County Medical Society during May amounted to 2,568 pieces, of which 979 was incoming and 1,590 outgoing mail.

Harry M. Hoxsey, Director of a Detroit "cancer clinic," who was sentenced May 8 by Judge W. MacKay Skillman in Recorder's Court to serve six months in the House of Correction for practicing medicine without a license, appeared before Judge Skillman on May 29 to request permission to leave the jurisdiction of the court. Hoxsey said he had received word from his former home in Muscatine, Iowa, that his brother, Dan, had been found shot to death in an automobile there. Hoxsey said his brother had been connected with a radio station. Hoxsey's request was granted. He is at present at liberty under a $2,000.00 bond.

The Public Education Committee of the Wayne County Medical Society is now scheduling two and three radio talks over Station WEXL per week. The medical broadcasts are given on Tuesday, Thursday and Friday, 10:30 to 10:45 A. M.

The annual reports of all committees for the year 1930-31 are being published in The Bulletin of the Wayne County Medical Society. Every committee has held numerous meetings throughout the year, some as frequently as one per week. As a result, definite progress has been made by the Society.

The following resolution, passed by the Council of the Wayne County Medical Society, may be of interest:

RESOLUTION

"In view of the fact that members of the medical profession of Wayne County, Michigan, are being exploited constantly by professional and amateur advertising solicitors to insert cards in various programs, year books, magazines, calendars, etc., which usually results in veritable donations of many thousands of dollars each year by said doctors;

"THEREFORE, BE IT RESOLVED: That The Council of the Wayne County Medical Society be appointed a Board of Censors to investigate each and every request of this nature, with a view to curtailing such financial inroads; and

"BE IT FURTHER RESOLVED: That all solicitors for said cards in programs, periodicals, and other media, whether for advertising or charitable purposes, be requested by each doctor to submit all proposals for such advertisements to the Board of Censors for approval, before said doctor invests in the scheme."

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.
MRS. W. L. FINTON, Secretary, Jackson, Mich.

BAY COUNTY AUXILIARY

Dr. James W. Inches, Detroit, addressed the members of the Bay County Medical Society and their wives the evening of June 6 at the ladies' night dinner meeting at the Hotel Wehonah. After being introduced by Federal Judge Arthur J. Tuttle, Dr. Inches showed slides and movies of trips he took through Africa and made explanatory comments upon them. Several Saginaw guests were included among the seventy present.

INGHAM COUNTY AUXILIARY

The Ingham County Auxiliary closed its year on Monday, May 8, with a membership of sixty-two members. The past winter members sewed at each of the local hospitals making baby garments, surgical pads, bandages, and, just before Christmas, 200

Christmas candy bags. Three complete layettes were donated by members and were used in emergency cases. At Thanksgiving and also at Christmas large baskets of food were taken to the home of a needy physician. Members are trying to make the Ingham County Auxiliary worthy of existence and as the membership increases, accordingly will the good work increase.

New officers elected for the coming year are: Mrs. H. S. Bartholomew, president; Mrs. P. C. Strauss, vice president; Mrs. T. P. VanderZalm, secretary-treasurer.

THE DOCTOR'S LIBRARY

SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 11, number 2. (Lahey Clinic Number—April, 1931), 248 pages with 88 illustrations. Per clinic year (February, 1931, to December, 1931.) Paper, $12.00; Cloth, $16.00. Philadelphia and London.

MEDICAL CARE OF THE WAGE EARNER. Norman E. Clarke, M.S., M.D., Cardiologist-in-Chief of Grace Hospital, Consulting Cardiologist North-End Clinic. 1931. Herald Printing Company, Detroit.

This is a most interesting little book. In ten well written chapters the author has analyzed the medical situation as it obtains particularly in the larger cities. He has discussed the economic background, describing clearly the condition in which the wage earner finds himself a dehumanized factor in industry to be cast aside when invention has displaced him by the automatic machine. He has been the victim of high pressure salesmanship coupled with low "sales resistance" and installment buying. Even if employed, he is usually unable to meet the emergency of sickness in his home. Hence the free clinic. The wavering faith of the public in the medical profession as evidenced in popular magazine articles is discussed at length. This Dr. Clarke considers only of a transitory nature, after which the physician will establish himself more firmly than ever in public estimation. The medical profession itself also comes in for critical examination. Three chapters deal with industry. Then we have a plan for medical care of the wage earner and his family. Whether one agrees entirely with the author's conclusions the book is thought provoking and therefore worthy of attention as a constructive contribution to the subject.

PRACTICAL X-RAY TREATMENT. By Arthur W. Erskine, M.D., Roentgenologist to St. Luke's Methodist Hospital and Mercy Hospital, Cedar Rapids, Iowa, member and past president of the Radiological Society of North America, member of the American Roentgen Ray Society, Chairman of the Section on Radiology of the American Medical Association, fellow of the American Association for the Advancement of Science and of the American College of Radiology, member of the Committee on Standardization of X-ray Measurements of the Radiological Society. The Bruce Publishing Company. St. Paul, Minnesota. Price $3.50.

This small book is primarily intended for roentgenologists who are forced to do X-ray therapy under circumstances which satisfy only the essential requirements. It is devoted entirely to the author's methods with no attempt to consider the different opinions of various writers. The entire subject is covered in a brief and direct manner without sacrificing anything essential. The chapters devoted to the theory and physics of X-ray treatment are not burdened with the usual complicated mathematical discussions and formulæ. The absolute (r) unit of dosage is used and only the most accurate methods of measurement are described, thus eliminating much confusion. The author believes that the first essential for successful X-ray therapy is accuracy of dosage. This he thinks can best be obtained by using the fewest possible technical factors. Therefore only three technics are described in the treatment of pathological conditions by means of the usual "10 inch" apparatus. A fourth technic is described which is suitable for equipment of 200 kilovolts capacity. In view of the wide variety of technics in use and the variation in the results obtained it seems that this viewpoint cannot be over-emphasized. The conditions suitable for X-ray therapy are considered under three headings, namely, skin diseases, non-malignant conditions and malignant conditions. Practical suggestions for the medical care and management of patients receiving irradiation are also included. There are twenty-eight illustrations, including curves, tables and isodose charts. There is indeed need for just such a work as this and we have seen none to date which better fulfills the purpose for which it is intended. Everyone who is at all interested in X-ray treatment should have it. Dr. Erskine's name is sufficient recommendation.

COLLECTED PAPERS 1904-1929. By Edwin Beer, M.D., New York. With 252 Illustrations. Pages 827. Paul B. Hoeber, Inc., New York, 1931.

This volume consists of a collection of medical papers on a variety of subjects covering a period of a quarter of a century. It is made in the attractive style for which the Hoeber publications are noted. The subjects are chiefly surgical. They are classified under gastrointestinal tract, papers on the liver, on the spleen, on the spinal cord, concluding with a number of miscellaneous topics. Those who have been familiar with the author's work over this period will welcome this work in which they may have the results of Dr. Beer's studies assembled between convenient covers.

CLINICAL DIAGNOSIS BY LABORATORY METHODS, A WORKING MANUAL OF CLINICAL PATHOLOGY. By James Campbell Todd, Ph.B., M.D., late professor of clinical pathology, University of Colorado School of Medicine and Arthur Hawley Sanford, A.M., M.D., professor of clinical pathology, University of Minnesota (The Mayo Foundation), Head of Section on Clinical Laboratories, Mayo Clinic. 7th ed., thoroughly revised with 347 illustrations, 29 in colors, 765 pages. W. B. Saunders Co., Philadelphia, 1931. Price, $6.00 net.

Another edition of this standard work on laboratory technic and diagnosis is to be welcomed. The numerous changes in text, distributed throughout the work, bring it up to date. A forty page index and an outline index of the laboratory findings in a number of diseases make the subject matter readily available.

HEART DISEASE. Paul Dudley White, M.D., Instructor in Medicine, Harvard Medical School; Physician Massachusetts General Hospital, Boston. Pages 931. Price $12.00. New York. The Macmillan Company. 1931.

This is preeminently a work on heart disease. Such subjects as anatomy, physiology, pathology, pharmacology, while important, are incidental to the main theme of the work. The reader is referred to authoritative works on such subjects that deal more exhaustively than is desirable in a book of this nature. The volume is divided into four parts. Part one deals with the examination of the patient and an evaluation of his symptoms; the second part discusses the causes of heart disease; the third part, the structural changes present in the heart and great vessels, and the fourth part takes up disorders of function. "No longer in the diagnosis of heart disease," says the author, "can we be content to think of pathology alone, nor yet should we abandon the structural changes to think of function alone." The author would add also to these a third, namely, the etiological factor. The subject of treatment of each

condition is included in the chapter or section dealing with that condition. When we consider the place that deaths from cardiac disease occupy in the mortality statistics in the country, the importance of such a work as this cannot be over-estimated. It is a work not only for the specialist in heart disease, but also for the general practioner who meets these cases first. Among the many excellent chapters, one to which we call particular attention is that on cardiovascular roentgenology. If a study of the contour, size and position of the heart is of any importance at all to the physician or cardiologist, it seems to us that X-ray examination should be employed much more extensively that it has ever been. There is no other part of the human anatomy that lends itself more admirably to X-ray examination than the thoracic cage with its contents. In the chapter mentioned the author goes into detail in the matter of a contribution of roentgenology to cardiovascular disease. The author has appended a bibliography of over 200 pages; also an extensive list of questions or problems the study, and as far as possible the solution, of which would extend as well as crystallize one's knowledge of the subject.

HANDBOOK OF PHYSIOLOGY. W. D. Halliburton, M.D., LL.D., F.R.C.P., F.R.S., Emeritus Professor of Physiology, University of London, King's College, and R. J. S. McDowall, M.B., D.Sc., F.R.C.P. (Edin.), Professor of Physiology, University of London, King's College. Nineteenth Edition with numerous illustrations in the text, many of which are colored plates. Philadelphia. P. Blakiston's Son and Company, 1012 Walnut St. 1930. Price, $4.75.

This nineteenth edition has followed closely upon its immediate predecessor, which it has been the reviewer's pleasure to review at length in a comparatively recent number of this Journal. Many of the older generation of doctors in this State have a kindly interest in Halliburton's and McDowall's Handbook of Physiology or Kirk's Handbook of Physiology as it was originally called. This work was originally a product of old St. Bartholomew's Hospital, London. The first edition appeared in 1848. The present authors, Halliburton and McDowall, have maintained an active interest in keeping the book revised so as to embody the latest advances in the science of physiology. In this nineteenth edition the revision has involved almost every page either in new material or re-arrangement of the order within the chapters. Comparing the present edition with its predecessors, general physiological processes have been emphasized rather than the functions of isolated organs.

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. Editors: Carey F. Coombs, M.D., F.R.C.P., and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.P. Twenty-nine Contributors. Forty-ninth Year. 1931. New York. William Wood and Company. Price $6.00.

This work, as is well known, deals with the recent advances in medicine and surgery. The subjects are arranged alphabetically. They are covered with as much detail as the scope of 525 pages will permit. The work is well illustrated and very carefully indexed. When a work has been before the profession for forty-eight years, a new edition needs scarcely more than an introduction. The present work will be found an admirable desk companion not only for the general practitioner, but those engaged in the various specialties as well.

NUTRITION AND DIET IN HEALTH AND DISEASE. By James S. McLester, M.D., Professor of Medicine at the University of Alabama, Birmingham, Alabama. 2nd. ed., revised and reset, 891 pages. W. B. Saunders Co., Philadelphia, 1931. Price, $8.50.

The second edition of this work is a fairly comprehensive and up-to-date summary of the field of nutrition. It deals with metabolism, digestion, nutritional factors, food products, the normal diet and the feeding of infants. Throughout, the medical viewpoint is emphasized as indicated by the treatment of deficiency diseases, diabetes, gout, obesity and leanness, anaphylaxis and food poisoning, diseases of the urinary tract, of the digestive organs, of the heart and arteries, of the blood, of the joints, of the nervous system, and of the endocrine organs and skin. There is a section on the feeding of surgical patients. Tables of weight and height, food values, chemical composition of foods and special methods of feeding are included. Throughout the work the author quotes much recent work, dealing with it in a moderate way, sometimes, however, to the extent of vacillating from one extreme position to another. A good bibliography appears at the end of each chapter and the inclusive index renders it a good desk reference.

Classified Advertisements